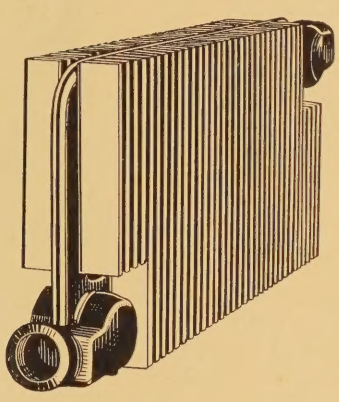
AIA File No. 30C4

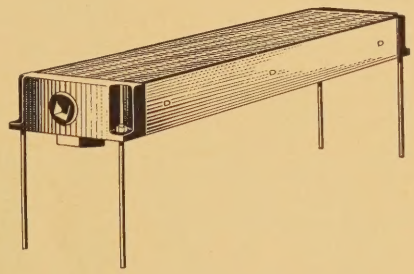
ROME CONVECTORS

TWO DISTINCT TYPES

ROBRAS BOX FIN



ROCOP TUBULAR



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ROME RADIATION COMPANY
Division of REVERE COPPER AND BRASS, Incorporated
ROME, NEW YORK

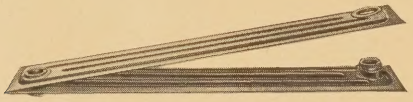
AIA File No. 30C4

ROME CONVECTORS — TWO DISTINCT TYPES

The many varied requirements met with in the heating field, and the wide range of prices that exist, have been very carefully considered by ROME RADIATION COMPANY, Division of Revere Copper and Brass, Incorporated, in designing and placing on the market ROME Convectors. In order to meet practically all conditions where the use of the convector type of heater is possible, ROME Convectors are available in two distinct types—ROBRAS and ROCOP. The differences between the two types will be apparent from illustrations and descriptions given later in this catalog. While these two devices fall into different price fields, high quality, consistent with all other Revere products, has been maintained in the design and construction of each. In the interest of clearness this catalog has been divided into four main parts. Part One is devoted to ROBRAS Convectors; Part Two describes ROCOP Convectors, while Standard Enclosures are covered by Part Three. The last part contains important information of a general nature concerning both types of Convectors and constitutes Part Four.

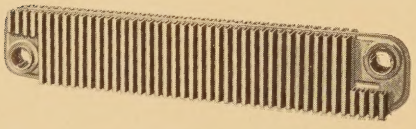
PART I — ROBRAS CONVECTORS

ROBRAS Convectors were among the very first concealed heating devices to be placed on the market. Thousands of them are now installed throughout the country to the complete satisfaction of owners, architects and contractors. They have earned for themselves an enviable position in the heating field which is unquestioned.



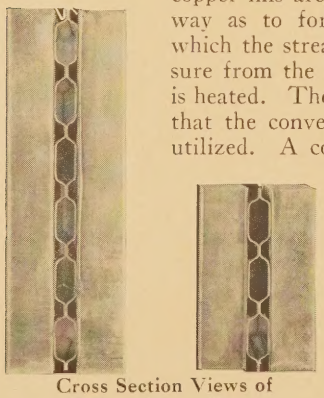
Two stamped brass sheets with nipples in place ready for welding

Section welded and trimmed, ready for fins



Completed section ready for connection fittings

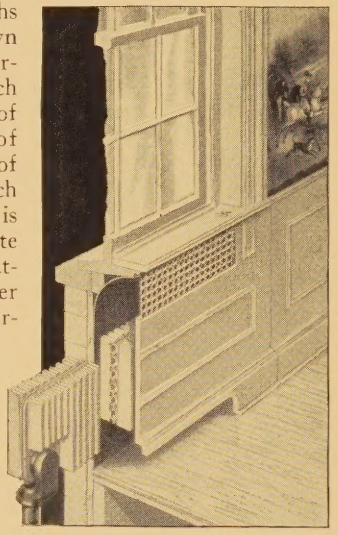
The ROBRAS Convector is constructed, as shown on this page, from two specially formed heavy brass sheets which, when electrically welded together, form substantial passageways for steam or water. To this section continuous copper fins are metallicly bonded in such a way as to form individual flues through which the stream of air entering the enclosure from the floor of the room passes and is heated. The term "Convector" indicates that the convection principle of heating is utilized. A comparison between the cross section of the Type H (10¾" high) and Type L (5½" high) is also shown.



Cross Section Views of High and Low Types

ROBRAS Convectors are suitable for either steam or hot water systems where the operating pressure is not in excess of 15 pounds per square inch.

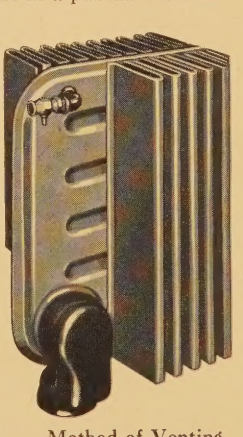
Both the high and low types are made in five depths and nine lengths as shown on pages 3 and 4 with corresponding capacities which depend on the height of enclosure used. One of the outstanding features of ROBRAS convectors, which is generally recognized, is their ability to concentrate in a given space more heating capacity than any other convector now on the market.



Typical View of Under Window Installation

ROBRAS Convectors weigh about one-fifth as much as an equivalent amount of direct cast iron radiation. Their design embodies some unique features not found in other convectors. Because they can be furnished in such variety and because the connection fittings may be set in different positions at the factory to meet varying space conditions, they are the most adaptable of convectors. They also have a higher proportion of contact between prime and extended surface than other convectors.

A new method of venting ROBRAS convectors for use on hot water systems is shown at the right in a partial view of a typical section. This now permits the use of the steam type section shown on page 8, figures 27 and 30, with vertical or horizontal supply and return connections at the bottom. By using vertical connections, the convectors can be installed in wall recesses of minimum length.



Method of Venting for Hot Water

When ordering ROBRAS convectors for hot water systems made up to assemblies 5 to 10 as shown on page 6, the letter "A" must be added to the assembly number; for example, 8A, 10A, etc. This indicates that the venting arrangement mentioned above is required.

ROBRAS CONVECTOR CAPACITIES with Face Outlets

Heating effect in Equivalent Square Feet (240 B.t.u.). Steam temperature 215°. Entering air temperature 65°.

In tables below capacities in Square Feet are shown in bold face type with corresponding Convector designations.

B.t.u. requirements divided by 240 will equal the corresponding convector capacity in square feet.

Enclosure Height Inches	NOMINAL LENGTH OF CONVECTOR																	
	18 in.		22 in.		26 in.		32 in.		38 in.		44 in.		50 in.		60 in.		70 in.	
Robras Convectors 3½ inches deep—Face Outlets																		
16	18L3	**10½**	22L3	**12½**	26L3	**15**	32L3	**18¼**	38L3	**21½**	44L3	**25**	50L3	**28¾**	60L3	**34**	70L3	**39¾**
20	18L3 18H3	**11¼** **13¼**	22L3 22H3	**13½** **16½**	26L3 26H3	**16** **19¾**	32L3 32H3	**19¾** **24½**	38L3 38H3	**23½** **29**	44L3 44H3	**27** **33½**	50L3 50H3	**30½** **38**	60L3 60H3	**36¾** **46**	70L3 70H3	**43** **54**
23	18L3 18H3	**12** **14½**	22L3 22H3	**14** **18**	26L3 26H3	**16½** **21½**	32L3 32H3	**20¾** **26¼**	38L3 38H3	**24½** **31½**	44L3 44H3	**28¼** **36¼**	50L3 50H3	**32¼** **40¾**	60L3 60H3	**38½** **49½**	70L3 70H3	**45** **58**
26	18L3 18H3	**12¼** **15½**	22L3 22H3	**14¾** **19¼**	26L3 26H3	**17¼** **22¾**	32L3 32H3	**21¾** **28**	38L3 38H3	**25½** **33½**	44L3 44H3	**29¼** **38½**	50L3 50H3	**33½** **43¼**	60L3 60H3	**40¼** **52¼**	70L3 70H3	**47** **61**
29	18L3 18H3	**12¾** **16½**	22L3 22H3	**15¼** **20½**	26L3 26H3	**18** **24**	32L3 32H3	**22½** **29½**	38L3 38H3	**26½** **35**	44L3 44H3	**30½** **40½**	50L3 50H3	**34¾** **45½**	60L3 60H3	**41½** **55**	70L3 70H3	**48¼** **64**
32	18L3 18H3	**13** **17¼**	22L3 22H3	**16** **21½**	26L3 26H3	**18½** **25**	32L3 32H3	**23** **30¾**	38L3 38H3	**27** **36¾**	44L3 44H3	**31¼** **42¼**	50L3 50H3	**35¾** **47¾**	60L3 60H3	**42¾** **57¼**	70L3 70H3	**49¾** **66¾**
36	18L3 18H3	**13½** **18¼**	22L3 22H3	**16½** **22½**	26L3 26H3	**19** **26¼**	32L3 32H3	**23¾** **32¼**	38L3 38H3	**28** **38½**	44L3 44H3	**32¼** **44½**	50L3 50H3	**36¾** **50**	60L3 60H3	**44** **60¼**	70L3 70H3	**51¼** **70**
48	18L3 18H3	**14½** **20½**	22L3 22H3	**17¾** **25**	26L3 26H3	**20¾** **29½**	32L3 32H3	**25½** **36**	38L3 38H3	**30** **43**	44L3 44H3	**34½** **49½**	50L3 50H3	**39¼** **56¼**	60L3 60H3	**47** **67½**	70L3 70H3	**54¾** **78½**
Robras Convectors 5½ inches deep—Face Outlets																		
16	18L5	**13½**	22L5	**16½**	26L5	**19½**	32L5	**24**	38L5	**28½**	44L5	**32¾**	50L5	**37**	60L5	**44½**	70L5	**52**
20	18L5 18H5	**14¾** **18½**	22L5 22H5	**17¾** **23**	26L5 26H5	**21¼** **27¼**	32L5 32H5	**26** **33½**	38L5 38H5	**30½** **40**	44L5 44H5	**35½** **46**	50L5 50H5	**40½** **52½**	60L5 60H5	**48½** **63½**	70L5 70H5	**56½** **74**
23	18L5 18H5	**15¼** **20**	22L5 22H5	**18¾** **24¾**	26L5 26H5	**22¼** **29½**	32L5 32H5	**27¼** **36¼**	38L5 38H5	**32** **43**	44L5 44H5	**37½** **49½**	50L5 50H5	**42¾** **56½**	60L5 60H5	**51** **68¼**	70L5 70H5	**59½** **80**
26	18L5 18H5	**16** **21½**	22L5 22H5	**19½** **26¼**	26L5 26H5	**23** **31¼**	32L5 32H5	**28½** **38½**	38L5 38H5	**33½** **46**	44L5 44H5	**39** **53**	50L5 50H5	**44¾** **60¼**	60L5 60H5	**53** **72½**	70L5 70H5	**62** **84½**
29	18L5 18H5	**16½** **23**	22L5 22H5	**20¼** **28**	26L5 26H5	**24** **33¼**	32L5 32H5	**29½** **40¾**	38L5 38H5	**35** **48½**	44L5 44H5	**40¼** **56¼**	50L5 50H5	**46¼** **63¾**	60L5 60H5	**55** **76¾**	70L5 70H5	**64¼** **89½**
32	18L5 18H5	**17** **24**	22L5 22H5	**21** **29½**	26L5 26H5	**24¾** **35**	32L5 32H5	**30½** **43**	38L5 38H5	**36** **51**	44L5 44H5	**41½** **59**	50L5 50H5	**47½** **66½**	60L5 60H5	**56½** **80¼**	70L5 70H5	**66** **93½**
36	18L5 18H5	**17¾** **25½**	22L5 22H5	**21¾** **31**	26L5 26H5	**25½** **36¾**	32L5 32H5	**31¾** **45¼**	38L5 38H5	**37¼** **53¾**	44L5 44H5	**42¾** **61½**	50L5 50H5	**49** **70¼**	60L5 60H5	**58¼** **84¾**	70L5 70H5	**68¼** **98**
48	18L5 18H5	**19** **28¼**	22L5 22H5	**23½** **34¾**	26L5 26H5	**27½** **41**	32L5 32H5	**33¾** **50¾**	38L5 38H5	**40** **60¼**	44L5 44H5	**45¾** **69¼**	50L5 50H5	**52¼** **79**	60L5 60H5	**62** **95**	70L5 70H5	**73** **109½**
Robras Convectors 7½ inches deep—Face Outlets																		
20	18L7	**20**	22L7	**24½**	26L7	**29**	32L7	**35½**	38L7	**42¼**	44L7	**49**	50L7	**56¼**	60L7	**66¼**	70L7	**77½**
23	18L7 18H7	**21** **27½**	22L7 22H7	**25¾** **33¼**	26L7 26H7	**30¾** **39½**	32L7 32H7	**37¾** **49**	38L7 38H7	**45** **57½**	44L7 44H7	**52** **67**	50L7 50H7	**59½** **76½**	60L7 60H7	**70½** **92**	70L7 70H7	**83** **109**
26	18L7 18H7	**22** **30¼**	22L7 22H7	**27** **36**	26L7 26H7	**32** **42¾**	32L7 32H7	**39¼** **53**	38L7 38H7	**47** **62**	44L7 44H7	**54½** **72**	50L7 50H7	**62** **82**	60L7 60H7	**74** **98½**	70L7 70H7	**87** **117**
29	18L7 18H7	**22¾** **32½**	22L7 22H7	**27¾** **39**	26L7 26H7	**33¼** **45½**	32L7 32H7	**40¾** **56½**	38L7 38H7	**48¾** **66¼**	44L7 44H7	**56½** **76½**	50L7 50H7	**64½** **87½**	60L7 60H7	**77¼** **105**	70L7 70H7	**90½** **123½**
32	18L7 18H7	**23½** **34½**	22L7 22H7	**28¾** **41¼**	26L7 26H7	**34¼** **48**	32L7 32H7	**42** **60**	38L7 38H7	**50¼** **70**	44L7 44H7	**58¼** **81**	50L7 50H7	**66¾** **92**	60L7 60H7	**80** **110½**	70L7 70H7	**93¾** **129**
36	18L7 18H7	**24½** **36½**	22L7 22H7	**30** **44**	26L7 26H7	**35½** **51¼**	32L7 32H7	**43½** **63½**	38L7 38H7	**52** **74½**	44L7 44H7	**60¼** **86**	50L7 50H7	**69** **98**	60L7 60H7	**83** **117½**	70L7 70H7	**97** **136**
48	18L7 18H7	**26¾** **41**	22L7 22H7	**32½** **49¾**	26L7 26H7	**38¾** **58¾**	32L7 32H7	**47** **72¼**	38L7 38H7	**56** **85**	44L7 44H7	**64¾** **98**	50L7 50H7	**74½** **112**	60L7 60H7	**90** **133**	70L7 70H7	**105½** **152½**
Robras Convectors 9½ inches deep—Face Outlets																		
23	18L9	**23**	22L9	**28¼**	26L9	**33½**	32L9	**41½**	38L9	**49**	44L9	**56½**	50L9	**64½**	60L9	**77½**	70L9	**90½**
26	18L9 18H9	**24** **30½**	22L9 22H9	**29¾** **37**	26L9 26H9	**35¼** **44½**	32L9 32H9	**43½** **55¼**	38L9 38H9	**51½** **65**	44L9 44H9	**59½** **76**	50L9 50H9	**67½** **86**	60L9 60H9	**81½** **104**	70L9 70H9	**95** **121½**
29	18L9 18H9	**25** **33**	22L9 22H9	**31** **40**	26L9 26H9	**36¾** **47½**	32L9 32H9	**45** **59**	38L9 38H9	**53¾** **69½**	44L9 44H9	**62** **81½**	50L9 50H9	**70½** **92**	60L9 60H9	**84¾** **111**	70L9 70H9	**99** **130**
32	18L9 18H9	**26** **35¼**	22L9 22H9	**32** **42½**	26L9 26H9	**38** **50½**	32L9 32H9	**46½** **62¼**	38L9 38H9	**55¾** **73½**	44L9 44H9	**64½** **85½**	50L9 50H9	**73** **97½**	60L9 60H9	**87½** **117**	70L9 70H9	**103** **137**
36	18L9 18H9	**26¾** **37½**	22L9 22H9	**33** **45½**	26L9 26H9	**39½** **53¾**	32L9 32H9	**48¼** **66**	38L9 38H9	**57¾** **78½**	44L9 44H9	**67¼** **90½**	50L9 50H9	**76** **104**	60L9 60H9	**91½** **124**	70L9 70H9	**107** **145**
48	18L9 18H9	**29½** **42¾**	22L9 22H9	**35¾** **51½**	26L9 26H9	**42¼** **61¼**	32L9 32H9	**51¾** **75**	38L9 38H9	**62½** **88½**	44L9 44H9	**73¾** **102½**	50L9 50H9	**83½** **117¾**	60L9 60H9	**100** **140**	70L9 70H9	**116½** **163**
60	18L9 18H9	**31** **46¼**	22L9 22H9	**37½** **56**	26L9 26H9	**44** **66¼**	32L9 32H9	**54** **81**	38L9 38H9	**66** **95¾**	44L9 44H9	**78** **111**	50L9 50H9	**88½** **127¼**	60L9 60H9	**105¾** **151**	70L9 70H9	**122¾** **175**
Robras Convectors 11½ inches deep—Face Outlets																		
23	18L11	**23¼**	22L11	**29**	26L11	**34**	32L11	**42**	38L11	**50¼**	44L11	**58**	50L11	**66¼**	60L11	**80**	70L11	**93½**
29	18L11 18H11	**26½** **34**	22L11 22H11	**32¼** **42**	26L11 26H11	**38** **50**	32L11 32H11	**47** **60½**	38L11 38H11	**55½** **71½**	44L11 44H11	**64** **83½**	50L11 50H11	**73** **94½**	60L11 60H11	**88** **113**	70L11 70H11	**102½** **132½**
36	18L11 18H11	**28½** **38**	22L11 22H11	**34½** **47**	26L11 26H11	**41¼** **56½**	32L11 32H11	**51** **68**	38L11 38H11	**60¼** **80½**	44L11 44H11	**69½** **94**	50L11 50H11	**79** **106½**	60L11 60H11	**94½** **128**	70L11 70H11	**110½** **149**
48	18L11 18H11	**31** **42¾**	22L11 22H11	**37½** **53**	26L11 26H11	**44½** **63¼**	32L11 32H11	**55¾** **78**	38L11 38H11	**65¾** **91½**	44L11 44H11	**75¾** **106½**	50L11 50H11	**86½** **120½**	60L11 60H11	**103¾** **144**	70L11 70H11	**120** **168**
72	18L11 18H11	**33½** **49**	22L11 22H11	**40½** **60½**	26L11 26H11	**48¼** **71¾**	32L11 32H11	**60¾** **89½**	38L11 38H11	**71½** **105**	44L11 44H11	**82½** **121¼**	50L11 50H11	**95¼** **137**	60L11 60H11	**113½** **164**	70L11 70H11	**130¾** **191½**
120	18L11 18H11	**35** **55½**	22L11 22H11	**43** **68**	26L11 26H11	**51** **80½**	32L11 32H11	**63** **99½**	38L11 38H11	**75** **118½**	44L11 44H11	**87** **136½**	50L11 50H11	**99½** **157**	60L11 60H11	**119½** **188**	70L11 70H11	**140** **220**

ROBRAS CONVECTOR CAPACITIES with Top Outlets

Heating effect in Equivalent Square Feet (240 B.t.u.). Steam temperature 215°. Entering air temperature 65°.

In tables below capacities in Square Feet are shown in bold face type with corresponding Convector designations.

B.t.u. requirements divided by 240 will equal the corresponding convector capacity in square feet.

Enclosure Height Inches	NOMINAL LENGTH OF CONVECTOR																	
	18 in.		22 in.		26 in.		32 in.		38 in.		44 in.		50 in.		60 in.		70 in.	
Robras Convectors 3½ inches deep—Top Outlets																		
16	18L3	**11¾**	22L3	**14½**	26L3	**17¼**	32L3	**21**	38L3	**25½**	44L3	**29**	50L3	**33½**	60L3	**39¾**	70L3	**47**
20	18L3 18H3	**12½** **15½**	22L3 22H3	**15¼** **18¾**	26L3 26H3	**18¼** **22½**	32L3 32H3	**22½** **27¾**	38L3 38H3	**26¾** **33**	44L3 44H3	**30¾** **38½**	50L3 50H3	**35½** **44**	60L3 60H3	**42½** **53¼**	70L3 70H3	**50** **62**
23	18L3 18H3	**13¼** **16¼**	22L3 22H3	**15¾** **20**	26L3 26H3	**19** **23¾**	32L3 32H3	**23½** **29¼**	38L3 38H3	**27¾** **35**	44L3 44H3	**32** **40¾**	50L3 50H3	**36¾** **46¼**	60L3 60H3	**44** **56**	70L3 70H3	**51¾** **65½**
26	18L3 18H3	**13¾** **17**	22L3 22H3	**16½** **20¾**	26L3 26H3	**19¾** **24¾**	32L3 32H3	**24¼** **30½**	38L3 38H3	**28¾** **36½**	44L3 44H3	**33** **42¾**	50L3 50H3	**37¾** **48½**	60L3 60H3	**45½** **58½**	70L3 70H3	**53½** **68¼**
29	18L3 18H3	**14¼** **17¾**	22L3 22H3	**17** **21½**	26L3 26H3	**20¼** **25¾**	32L3 32H3	**25** **31¾**	38L3 38H3	**29½** **37¾**	44L3 44H3	**34** **44¼**	50L3 50H3	**38¾** **50**	60L3 60H3	**47** **60½**	70L3 70H3	**55** **70¾**
32	18L3 18H3	**14½** **18½**	22L3 22H3	**17½** **22½**	26L3 26H3	**20¾** **26¾**	32L3 32H3	**25½** **33**	38L3 38H3	**30¼** **39**	44L3 44H3	**35** **45½**	50L3 50H3	**39¾** **51½**	60L3 60H3	**48** **62½**	70L3 70H3	**56¼** **73**
36	18L3 18H3	**14¾** **19¼**	22L3 22H3	**18** **23¼**	26L3 26H3	**21½** **27¾**	32L3 32H3	**26¼** **34¼**	38L3 38H3	**31** **40½**	44L3 44H3	**35¾** **47½**	50L3 50H3	**40¾** **53½**	60L3 60H3	**49** **64½**	70L3 70H3	**57½** **75½**
48	18L3 18H3	**15¾** **21**	22L3 22H3	**18¾** **25½**	26L3 26H3	**22½** **30½**	32L3 32H3	**27¾** **37½**	38L3 38H3	**33** **44½**	44L3 44H3	**38¼** **51½**	50L3 50H3	**43½** **58½**	60L3 60H3	**52½** **70½**	70L3 70H3	**61½** **81¾**
Robras Convectors 5½ inches deep—Top Outlets																		
16	18L5	**15½**	22L5	**18¾**	26L5	**22½**	32L5	**27½**	38L5	**32¾**	44L5	**38¼**	50L5	**43½**	60L5	**52¼**	70L5	**61½**
20	18L5 18H5	**16** **24**	22L5 22H5	**19½** **29½**	26L5 26H5	**23½** **34¾**	32L5 32H5	**28¾** **43**	38L5 38H5	**34½** **50½**	44L5 44H5	**40** **59**	50L5 50H5	**45¾** **67**	60L5 60H5	**54¾** **81**	70L5 70H5	**64½** **94¾**
23	18L5 18H5	**16¾** **24¾**	22L5 22H5	**20¼** **30¾**	26L5 26H5	**24¼** **36¼**	32L5 32H5	**29¾** **44¾**	38L5 38H5	**35½** **52¾**	44L5 44H5	**41¼** **61½**	50L5 50H5	**47** **70**	60L5 60H5	**56½** **84½**	70L5 70H5	**66½** **98¾**
26	18L5 18H5	**17¼** **25¾**	22L5 22H5	**20¾** **31¾**	26L5 26H5	**24¾** **37½**	32L5 32H5	**30½** **46¼**	38L5 38H5	**36½** **54¾**	44L5 44H5	**42½** **63½**	50L5 50H5	**48¼** **72½**	60L5 60H5	**58** **87½**	70L5 70H5	**68½** **102½**
29	18L5 18H5	**17½** **26½**	22L5 22H5	**21½** **33**	26L5 26H5	**25½** **38¾**	32L5 32H5	**31½** **47¾**	38L5 38H5	**37¼** **56½**	44L5 44H5	**43¼** **65½**	50L5 50H5	**49½** **74¾**	60L5 60H5	**59¼** **90**	70L5 70H5	**69¾** **105½**
32	18L5 18H5	**18** **27½**	22L5 22H5	**22** **33¾**	26L5 26H5	**26¼** **39¾**	32L5 32H5	**32** **49**	38L5 38H5	**38** **58**	44L5 44H5	**44** **67½**	50L5 50H5	**50½** **77**	60L5 60H5	**60½** **92½**	70L5 70H5	**71** **108¼**
36	18L5 18H5	**18½** **28¼**	22L5 22H5	**22½** **35**	26L5 26H5	**26¾** **41**	32L5 32H5	**33** **50½**	38L5 38H5	**38¾** **60**	44L5 44H5	**45¼** **69¾**	50L5 50H5	**51½** **79½**	60L5 60H5	**62** **95½**	70L5 70H5	**72½** **111½**
48	18L5 18H5	**19½** **30½**	22L5 22H5	**23¾** **37½**	26L5 26H5	**28** **44¼**	32L5 32H5	**34½** **54¼**	38L5 38H5	**41** **64½**	44L5 44H5	**47¾** **75**	50L5 50H5	**54¼** **85¼**	60L5 60H5	**65¼** **102½**	70L5 70H5	**76¼** **119¾**
Robras Convectors 7½ inches deep—Top Outlets																		
20	18L7	**24¼**	22L7	**30**	26L7	**35½**	32L7	**43½**	38L7	**52½**	44L7	**61**	50L7	**69½**	60L7	**83½**	70L7	**97½**
23	18L7 18H7	**25¼** **32**	22L7 22H7	**31** **39**	26L7 26H7	**37** **46¼**	32L7 32H7	**45½** **57**	38L7 38H7	**54½** **67½**	44L7 44H7	**63** **78¾**	50L7 50H7	**71½** **89**	60L7 60H7	**86¼** **107½**	70L7 70H7	**100½** **126½**
26	18L7 18H7	**26¼** **34**	22L7 22H7	**32** **41½**	26L7 26H7	**38¼** **49¼**	32L7 32H7	**46¾** **60¾**	38L7 38H7	**56¼** **71½**	44L7 44H7	**65** **83½**	50L7 50H7	**73¾** **94½**	60L7 60H7	**88½** **114**	70L7 70H7	**103½** **134¼**
29	18L7 18H7	**26¾** **35½**	22L7 22H7	**32¾** **43¾**	26L7 26H7	**39** **51¾**	32L7 32H7	**48** **64**	38L7 38H7	**57½** **75**	44L7 44H7	**66½** **88**	50L7 50H7	**75½** **99½**	60L7 60H7	**90½** **119¾**	70L7 70H7	**105½** **140¾**
32	18L7 18H7	**27½** **37¼**	22L7 22H7	**33½** **45½**	26L7 26H7	**39¾** **53¾**	32L7 32H7	**49** **66½**	38L7 38H7	**58¾** **78½**	44L7 44H7	**67¾** **91½**	50L7 50H7	**77** **103½**	60L7 60H7	**92½** **124¾**	70L7 70H7	**107½** **146½**
36	18L7 18H7	**28¼** **39**	22L7 22H7	**34½** **47¾**	26L7 26H7	**40¾** **56½**	32L7 32H7	**50** **69½**	38L7 38H7	**60** **82½**	44L7 44H7	**69¼** **95½**	50L7 50H7	**78½** **108½**	60L7 60H7	**94½** **130½**	70L7 70H7	**110¼** **152½**
48	18L7 18H7	**29¾** **43**	22L7 22H7	**36½** **52¼**	26L7 26H7	**42¾** **62¼**	32L7 32H7	**52½** **76½**	38L7 38H7	**62½** **91¼**	44L7 44H7	**72½** **105¼**	50L7 50H7	**82½** **119½**	60L7 60H7	**98¾** **143½**	70L7 70H7	**115¾** **166½**
Robras Convectors 9½ inches deep—Top Outlets																		
23	18L9	**29**	22L9	**36**	26L9	**42½**	32L9	**52½**	38L9	**62½**	44L9	**72½**	50L9	**82½**	60L9	**99½**	70L9	**116¼**
26	18L9 18H9	**29¾** **39½**	22L9 22H9	**36¾** **48¼**	26L9 26H9	**43¾** **56½**	32L9 32H9	**54** **70½**	38L9 38H9	**64** **84¼**	44L9 44H9	**74¼** **97½**	50L9 50H9	**84¾** **112**	60L9 60H9	**102** **134**	70L9 70H9	**119** **158½**
29	18L9 18H9	**30½** **41**	22L9 22H9	**37½** **50½**	26L9 26H9	**45** **59¼**	32L9 32H9	**55¼** **73¾**	38L9 38H9	**65½** **88**	44L9 44H9	**76** **101¾**	50L9 50H9	**86½** **116½**	60L9 60H9	**104** **140**	70L9 70H9	**121½** **164½**
32	18L9 18H9	**31¼** **42½**	22L9 22H9	**38¼** **52½**	26L9 26H9	**45¾** **61½**	32L9 32H9	**56¼** **76½**	38L9 38H9	**66¾** **91**	44L9 44H9	**77½** **105¼**	50L9 50H9	**87¾** **120**	60L9 60H9	**105¾** **144½**	70L9 70H9	**123½** **169¼**
36	18L9 18H9	**31¾** **44**	22L9 22H9	**39** **54¼**	26L9 26H9	**46½** **63¾**	32L9 32H9	**57¼** **79¼**	38L9 38H9	**68¼** **94¼**	44L9 44H9	**79** **109**	50L9 50H9	**89½** **124**	60L9 60H9	**108** **149½**	70L9 70H9	**126** **174¾**
48	18L9 18H9	**33½** **48**	22L9 22H9	**41** **58¾**	26L9 26H9	**48½** **69**	32L9 32H9	**59¾** **85¼**	38L9 38H9	**71¼** **100½**	44L9 44H9	**82¾** **116¾**	50L9 50H9	**93¾** **133**	60L9 60H9	**112¼** **159¾**	70L9 70H9	**131¼** **187**
60	18L9 18H9	**34½** **50¾**	22L9 22H9	**42** **62**	26L9 26H9	**49½** **72¾**	32L9 32H9	**61¾** **89½**	38L9 38H9	**73½** **105**	44L9 44H9	**85½** **122**	50L9 50H9	**96¾** **138¾**	60L9 60H9	**115½** **166¼**	70L9 70H9	**135¼** **195½**
Robras Convectors 11½ inches deep—Top Outlets																		
23	18L11	**32½**	22L11	**40**	26L11	**47½**	32L11	**58½**	38L11	**69¼**	44L11	**80½**	50L11	**91½**	60L11	**110½**	70L11	**129¼**
29	18L11 18H11	**34** **47**	22L11 22H11	**41½** **57½**	26L11 26H11	**49¾** **67½**	32L11 32H11	**61¼** **84**	38L11 38H11	**72½** **99**	44L11 44H11	**83½** **115½**	50L11 50H11	**95½** **131½**	60L11 60H11	**115** **158**	70L11 70H11	**134½** **185**
36	18L11 18H11	**35½** **50**	22L11 22H11	**43** **61¼**	26L11 26H11	**51¼** **72¼**	32L11 32H11	**63¼** **89**	38L11 38H11	**75** **106**	44L11 44H11	**86¼** **123½**	50L11 50H11	**98½** **140½**	60L11 60H11	**118½** **169**	70L11 70H11	**138½** **197¾**
48	18L11 18H11	**37** **54**	22L11 22H11	**45¼** **65¾**	26L11 26H11	**53½** **77½**	32L11 32H11	**66** **95¾**	38L11 38H11	**78** **113¾**	44L11 44H11	**89¾** **132**	50L11 50H11	**102½** **149¾**	60L11 60H11	**123** **180½**	70L11 70H11	**143½** **210¾**
72	18L11 18H11	**38½** **58¾**	22L11 22H11	**47** **71**	26L11 26H11	**56** **83¾**	32L11 32H11	**69½** **103**	38L11 38H11	**81¼** **122**	44L11 44H11	**93¾** **141**	50L11 50H11	**107** **159¾**	60L11 60H11	**128** **193½**	70L11 70H11	**149½** **225½**
120	18L11 18H11	**39** **62**	22L11 22H11	**48¼** **75**	26L11 26H11	**58** **88½**	32L11 32H11	**71** **109**	38L11 38H11	**83½** **130**	44L11 44H11	**96¼** **149**	50L11 50H11	**110** **169½**	60L11 60H11	**132** **203**	70L11 70H11	**154** **238**

ROBRAS DATA

CLEARANCE REQUIREMENTS FOR ROBRAS CONNECTIONS

ASSEMBLY 11, 12, 13 or 14

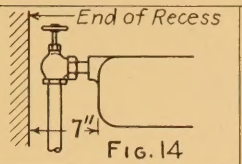


FIG. 14

ASSEMBLY 3, 4, 7 OR 8

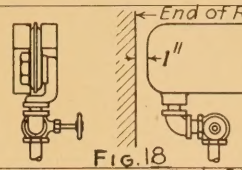


FIG. 18

ASSEMBLY 11, 12, 15 OR 16 HOT WATER

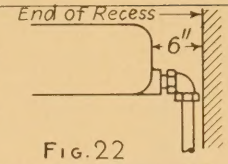


FIG. 22

ASSEMBLY 1, 2, 5, 6 9 or 10

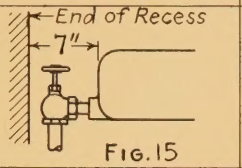


FIG. 15

ASSEMBLY 3, 4, 7 OR 8 Valve Handle through Front of Enclosure

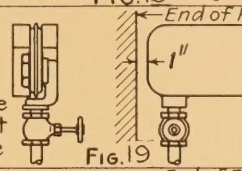


FIG. 19

ASSEMBLY 7, 8, 9, 10, 13 14, 17 OR 18

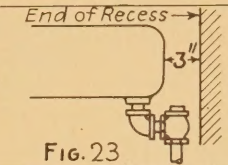


FIG. 23

ASSEMBLY 15, 16, 17 OR 18

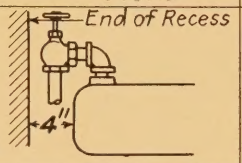


FIG. 16

ASSEMBLY 3, 4, 7 or 8

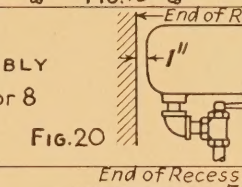


FIG. 20

ASSEMBLY 7, 8, 9, 10, 13, 14, 17 or 18

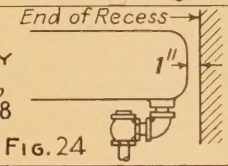


FIG. 24

ASSEMBLY 3, 4, 7 OR 8

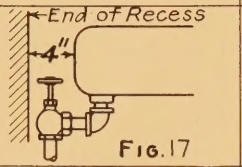


FIG. 17

ASSEMBLY 5, 6, 11, 12, 15 or 16

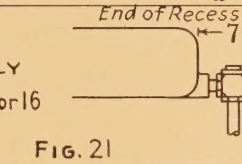


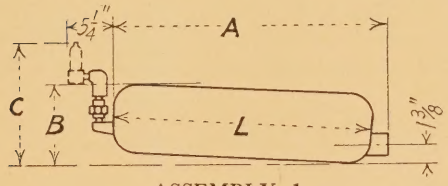
FIG. 21

NOTE :- DIMENSIONS SHOWN PROVIDE CLEARANCE FOR STANDARD MAKES OF VALVES AND TRAPS IN MOST COMMON USE AND DO NOT APPLY TO THERMAL CONTROL VALVES

On steam or vapor installations care should be taken that the supply valves are connected directly into the convector supply fittings so as to provide free draining of the condensate from the valve as shown in Figs. 14, 15 and 16 above. If the supply valve is connected at the bottom of a vertical supply pipe as in Figs. 17, 18, 19 and 20, etc., there is a tendency for noise, resulting from steam or vapor passing through condensate which accumulates in the line between the supply valve and the convector. If the latter connections are employed a large enough valve should be used to insure drainage of the condensate.

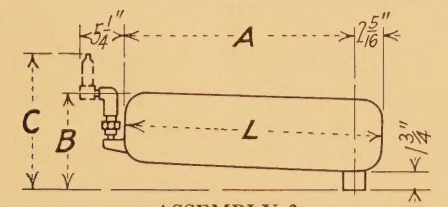
ROBRAS ASSEMBLIES

FOR ONE PIPE STEAM SYSTEMS



ASSEMBLY 1

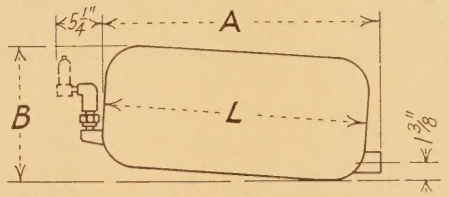
Nominal Length "L"	18"	22"	26"	32"	38"	44"	50"	60"	70"
A	19½	23½	27½	33½	39½	45½	51½	61½	71½
B	5¾	5¾	5⅞	6	6	6⅛	6¼	6⅜	6½
C	10⅞	10⅞	11	11⅛	11⅛	11¼	11⅜	11½	11⅝



ASSEMBLY 3

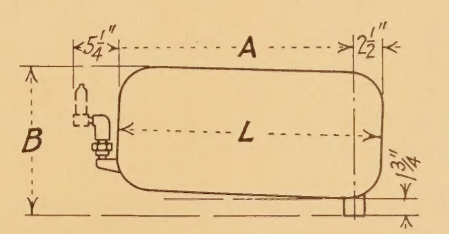
Nominal Length "L"	18"	22"	26"	32"	38"	44"	50"	60"	70"
A	15¾	19¾	23¾	29¾	35¾	41¾	47¾	57¾	67¾
B	7½	7½	7⅝	7¾	7¾	7⅞	8	8⅛	8¼
C	12⅝	12⅝	12⅞	13	13	13⅛	13¼	13⅜	13½

Note: Air valve receptacle with union will be furnished for these four assemblies.



ASSEMBLY 2

Nominal Length "L"	18"	22"	26"	32"	38"	44"	50"	60"	70"
A	19½	23½	27½	33½	39½	45½	51½	61½	71½
B	11	11	11⅛	11¼	11¼	11⅜	11½	11⅝	11¾



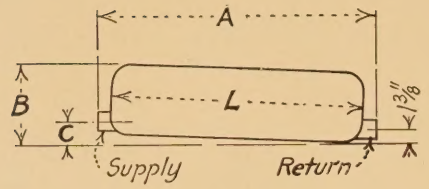
ASSEMBLY 4

Nominal Length "L"	18"	22"	26"	32"	38"	44"	50"	60"	70"
A	15¾	19¾	23¾	29¾	35¾	41¾	47¾	57¾	67¾
B	12¾	12¾	12⅞	13	13	13⅛	13¼	13⅜	13½

ROBRAS ASSEMBLIES

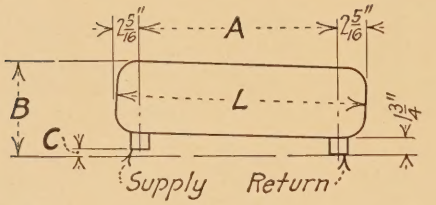
FOR TWO PIPE STEAM OR VAPOR SYSTEMS

LOW TYPE



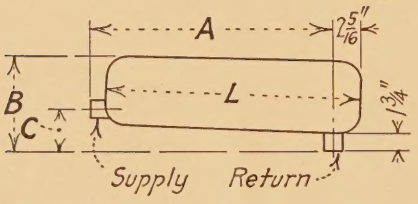
ASSEMBLY 5

Nominal Length "L"	18"	22"	26"	32"	38"	44"	50"	60"	70"
A	21	25	29	35	41	47	53	63	73
B	5 3/4	5 3/4	5 7/8	6	6	6 1/8	6 1/4	6 3/8	6 1/2
C	2 3/8	2 3/8	2 1/2	2 5/8	2 5/8	2 3/4	2 7/8	3	3 1/8



ASSEMBLY 7

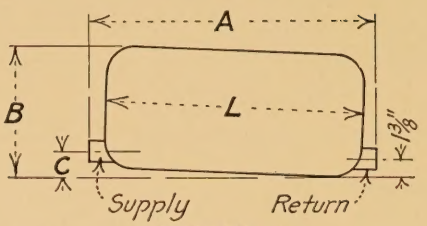
Nominal Length "L"	18"	22"	26"	32"	38"	44"	50"	60"	70"
A	13 1/2	17 1/2	21 1/2	27 1/2	33 1/2	39 1/2	45 1/2	55 1/2	65 1/2
B	7 1/2	7 1/2	7 5/8	7 3/4	7 3/4	7 7/8	8	8 1/8	8 1/4
C	1/4	1/4	3/8	1/2	1/2	5/8	3/4	7/8	1



ASSEMBLY 9

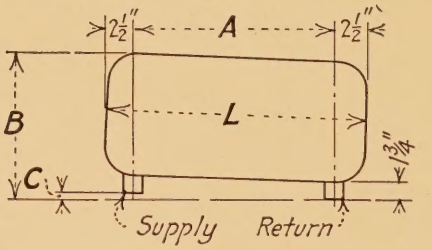
Nominal Length "L"	18"	22"	26"	32"	38"	44"	50"	60"	70"
A	17 1/4	21 1/4	25 1/4	31 1/4	37 1/4	43 1/4	49 1/4	59 1/4	69 1/4
B	7 1/2	7 1/2	7 5/8	7 3/4	7 3/4	7 7/8	8	8 1/8	8 1/4
C	4 1/8	4 1/8	4 1/4	4 3/8	4 3/8	4 1/2	4 5/8	4 3/4	4 7/8

HIGH TYPE



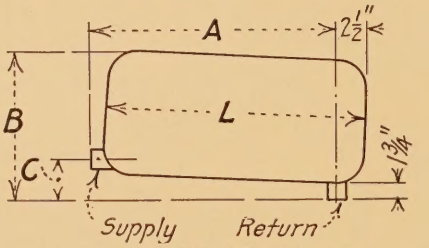
ASSEMBLY 6

Nominal Length "L"	18"	22"	26"	32"	38"	44"	50"	60"	70"
A	21	25	29	35	41	47	53	63	73
B	11	11	11 1/8	11 1/4	11 1/4	11 3/8	11 1/2	11 5/8	11 3/4
C	2 3/8	2 3/8	2 1/2	2 5/8	2 5/8	2 3/4	2 7/8	3	3 1/8



ASSEMBLY 8

Nominal Length "L"	18"	22"	26"	32"	38"	44"	50"	60"	70"
A	13 1/2	17 1/2	21 1/2	27 1/2	33 1/2	39 1/2	45 1/2	55 1/2	65 1/2
B	12 3/4	12 3/4	12 7/8	13	13	13 1/8	13 1/4	13 3/8	13 1/2
C	1/4	1/4	3/8	1/2	1/2	5/8	3/4	7/8	1



ASSEMBLY 10

Nominal Length "L"	18"	22"	26"	32"	38"	44"	50"	60"	70"
A	17 1/4	21 1/4	25 1/4	31 1/4	37 1/4	43 1/4	49 1/4	59 1/4	69 1/4
B	12 3/4	12 3/4	12 7/8	13	13	13 1/8	13 1/4	13 3/8	13 1/2
C	4 1/8	4 1/8	4 1/4	4 3/8	4 3/8	4 1/2	4 5/8	4 3/4	4 7/8

NOTE: If any of the above assemblies are required for Hot Water systems the letter "A" should be added to the Assembly Number, for example Assembly 8A

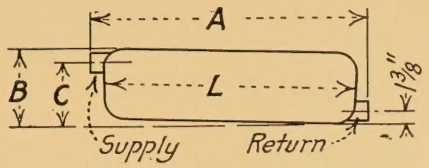
Directions for Ordering ROBRAS Convectors:

Specify for each item: (1) number of convectors required, (2) correct designation, (3) assembly number (see pages 5, 6, and 7), (4) tapping sizes required. Also give type of heating system.

ROBRAS ASSEMBLIES

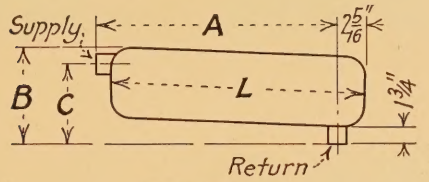
FOR TWO PIPE STEAM, VAPOR OR HOT WATER SYSTEMS

LOW TYPE



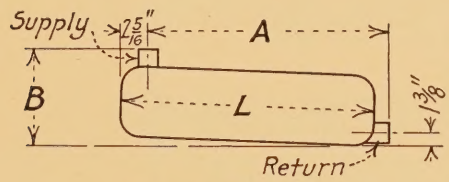
ASSEMBLY 11

Nominal Length "L"	18"	22"	26"	32"	38"	44"	50"	60"	70"
A	21	25	29	35	41	47	53	63	73
B	5 3/4	5 3/4	5 7/8	6	6	6 1/8	6 1/4	6 3/8	6 1/2
C	4 3/8	4 3/8	4 1/2	4 5/8	4 5/8	4 3/4	4 7/8	5	5 1/8



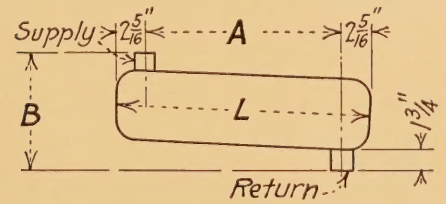
ASSEMBLY 13

Nominal Length "L"	18"	22"	26"	32"	38"	44"	50"	60"	70"
A	17 1/4	21 1/4	25 1/4	31 1/4	37 1/4	43 1/4	49 1/4	59 1/4	69 1/4
B	7 1/2	7 1/2	7 5/8	7 3/4	7 3/4	7 7/8	8	8 1/8	8 1/4
C	6 1/8	6 1/8	6 1/4	6 3/8	6 3/8	6 1/2	6 5/8	6 3/4	6 7/8



ASSEMBLY 15

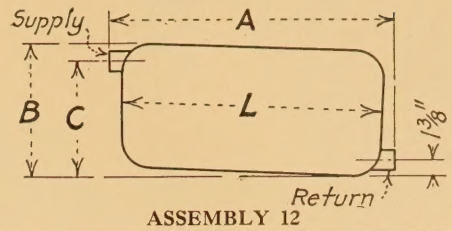
Nominal Length "L"	18"	22"	26"	32"	38"	44"	50"	60"	70"
A	17 1/4	21 1/4	25 1/4	31 1/4	37 1/4	43 1/4	49 1/4	59 1/4	69 1/4
B	7 1/2	7 1/2	7 5/8	7 3/4	7 3/4	7 7/8	8	8 1/8	8 1/4



ASSEMBLY 17

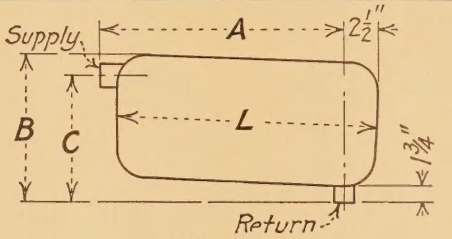
Nominal Length "L"	18"	22"	26"	32"	38"	44"	50"	60"	70"
A	13 1/2	17 1/2	21 1/2	27 1/2	33 1/2	39 1/2	45 1/2	55 1/2	65 1/2
B	9 1/4	9 1/4	9 3/8	9 1/2	9 1/2	9 5/8	9 3/4	9 7/8	10

HIGH TYPE



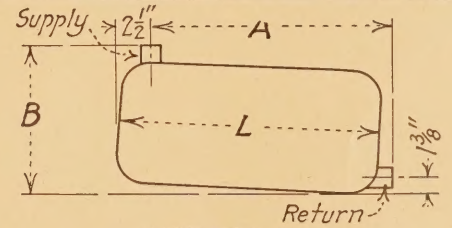
ASSEMBLY 12

Nominal Length "L"	18"	22"	26"	32"	38"	44"	50"	60"	70"
A	20 3/4	24 3/4	28 3/4	34 3/4	40 3/4	46 3/4	52 3/4	62 3/4	72 3/4
B	11	11	11 1/8	11 1/4	11 1/4	11 3/8	11 1/2	11 5/8	11 3/4
C	9 5/8	9 5/8	9 3/4	9 7/8	9 7/8	10	10 1/8	10 1/4	10 3/8



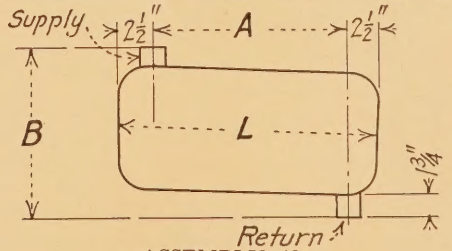
ASSEMBLY 14

Nominal Length "L"	18"	22"	26"	32"	38"	44"	50"	60"	70"
A	17 1/4	21 1/4	25 1/4	31 1/4	37 1/4	43 1/4	49 1/4	59 1/4	69 1/4
B	12 3/4	12 3/4	12 7/8	13	13	13 1/8	13 1/4	13 3/8	13 1/2
C	11 3/8	11 3/8	11 1/2	11 5/8	11 5/8	11 3/4	11 7/8	12	12 1/8



ASSEMBLY 16

Nominal Length "L"	18"	22"	26"	32"	38"	44"	50"	60"	70"
A	17 1/4	21 1/4	25 1/4	31 1/4	37 1/4	43 1/4	49 1/4	59 1/4	69 1/4
B	12 3/4	12 3/4	12 7/8	13	13	13 1/8	13 1/4	13 3/8	13 1/2



ASSEMBLY 18

Nominal Length "L"	18"	22"	26"	32"	38"	44"	50"	60"	70"
A	13 1/4	17 1/4	21 1/4	27 1/4	33 1/4	39 1/4	45 1/4	55 1/4	65 1/4
B	14 1/2	14 1/2	14 5/8	14 3/4	14 3/4	14 7/8	15	15 1/8	15 1/4

ROBRAS CONVECTOR DETAILS

LOW CONVECTORS

Designations	Depths	Assemblies
L-3	3½″	1 Section
L-5	5½″	1 Section
L-7	7½″	2-L3 Sections ½″ apart
L-9	9½″	1-L3 Section and 1-L5 Section ½″ apart
L-11	11½″	2-L5 Sections ½″ apart

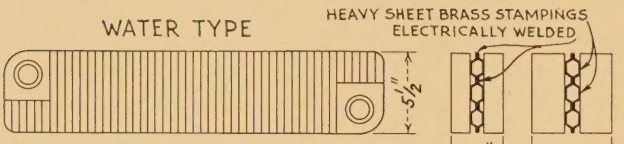


Fig. 25

Fig. 26

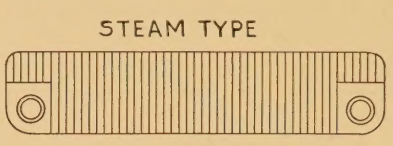


Fig. 27

HIGH CONVECTORS

Designations	Depths	Assemblies
H-3	3½″	1 Section
H-5	5½″	1 Section
H-7	7½″	2-H3 Sections ½″ apart
H-9	9½″	1-H3 Section and 1-H5 Section ½″ apart
H-11	11½″	2-H5 Sections ½″ apart

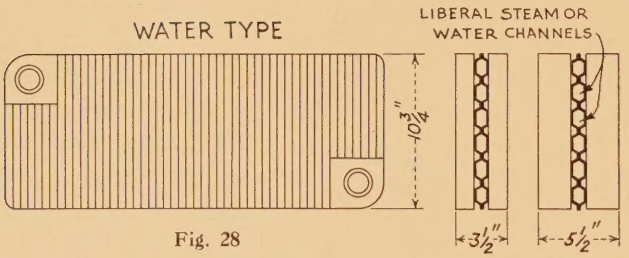


Fig. 28

Fig. 29

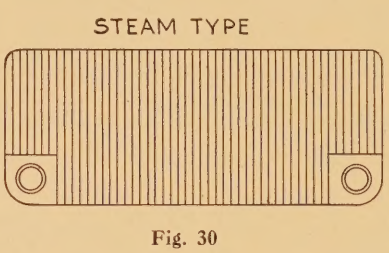


Fig. 30

The Robras Convector is made in two types as illustrated above. These are precisely alike with one exception. The water type (see Figs. 25 and 28) has top and bottom opposite end connections while the steam type (see Figs. 27 and 30) has bottom connections only. Figs. 26 and 29 show sectional end views of both low and high convectors of the 3½ inch and 5½ inch depths. These are single section convectors. Plan views of these convectors are shown in Figs. 31 and 32 below.

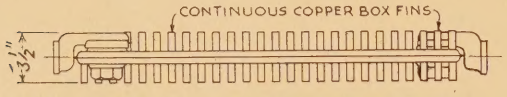


Fig. 31. Plan of L-3 or H-3 Convectors 3½ in. deep. TAPPED 1¼″

Fig. 32. Plan of L-5 or H-5 Convectors 5½ in. deep. TAPPED 1¼″

Plan Views Showing Connection Fittings

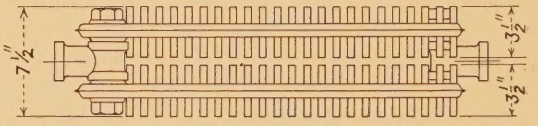


Fig. 33. Plan of L-7 or H-7 Convectors 7½ in. deep. TAPPED 1½″

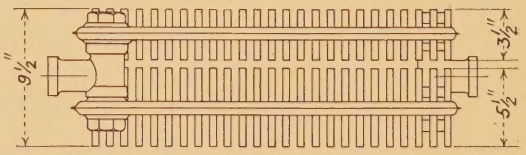


Fig. 34. Plan of L-9 or H-9 Convectors 9½ in deep. TAPPED 1½″

Lengths of all types of ROBRAS sections are 18″, 22″, 26″, 32″, 38″, 44″, 50″, 60″, 70″. *Figures representing section length should precede section designation; for example* 22-L3, 38-H5.

ROBRAS Assemblies The plan views, Figs. 33 and 34, above show how any two single sections of the same height and length can be assembled by means of special tee fittings to form a dual type convector. L-11 and H-11 convectors (not shown above) are similar to L-7 and H-7 respectively except that two sections 5½″ deep are used in each case making the overall depth 11½″. Top outlet enclosures are preferable for convectors 11½″ deep.

Connection Fittings ROBRAS convectors are furnished with connection fittings without extra charge for single units or assemblies up to and including those 11½″ deep. Larger assemblies are not recommended except for under the floor installations and must be connected on the job by the contractor. The connection fittings are set at the plant in positions called for by order and should not be changed unless absolutely necessary. L-9 or H-9 convectors should be installed with the narrow section at the back of the enclosure for best results.

ROBRAS BATHROOM UNITS

Typical Robras Bathroom Unit
Behind Basin—out of the way

The Robras Bathroom Unit is furnished complete with a convector in a simple metal enclosure. This enclosure is open at the bottom and has a grilled opening at the top. It takes up but little space on the wall and is usually placed under the lavatory, or in some other out-of-the-way place. The fact that these units are always suspended above the floor as illustrated means that it is easy to clean beneath them. The enclosures are lacquered white and can be readily repainted to match any desired color scheme.

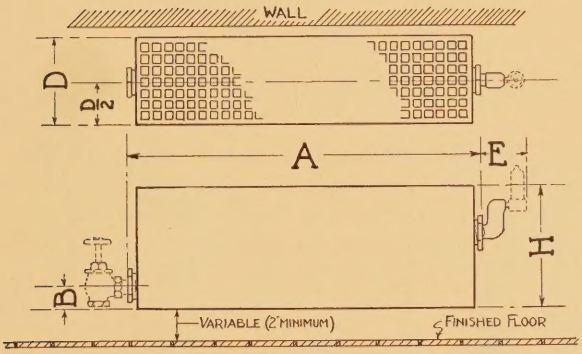
There are six sizes of these Bathroom Units with capacities from three to twenty square feet of radiation. Important dimensions are given in the tables below.

The Bathroom Unit is also well adapted for use in other small rooms such as pantries, breakfast rooms, booths, ticket offices, steamer staterooms; in fact almost anywhere where a compact radiator of moderate heating capacity is needed.

They are not to be used on Domestic Hot Water Supply Systems.

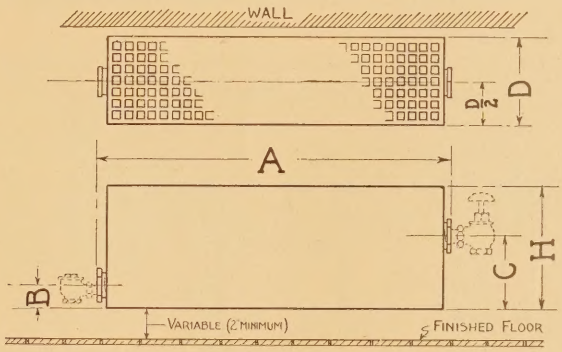
ROUGHING DATA

ONE PIPE ASSEMBLIES



Unit No.	Sq. Ft.	Convector	A	B	E	D	H
B3*	3½	F. T.	12	1⅜	5¼	3⅛	5
B5*	5	F. T.	17	1⅜	5¼	3⅛	5
B9	9	18L3	22	1½	3¾	3¾	8
B12	12	22L3	26	1½	3¾	3¾	8
B16	16	22L5	26	1½	3¾	5¾	8
B20	20	26L5	30	1½	3¾	5¾	8

TWO PIPE ASSEMBLIES



Unit No.	Sq. Ft.	Convector	A	B	C	D	H
B3*	3½	F. T.	12	1⅜	1⅜	3⅛	5
B5*	5	F. T.	17	1⅜	1⅜	3⅛	5
B9	9	18L3	22	1½	4¾	3¾	8
B12	12	22L3	26	1½	4⅞	3¾	8
B16	16	22L5	26	1½	4⅞	5¾	8
B20	20	26L5	30	1½	5	5¾	8

IN ORDERING ROBRAS BATHROOM UNITS it is important to specify: (1) Quantity of Units, (2) Unit number, (3) Type of Assembly, (4) Tappings, (5) Type of heating system.

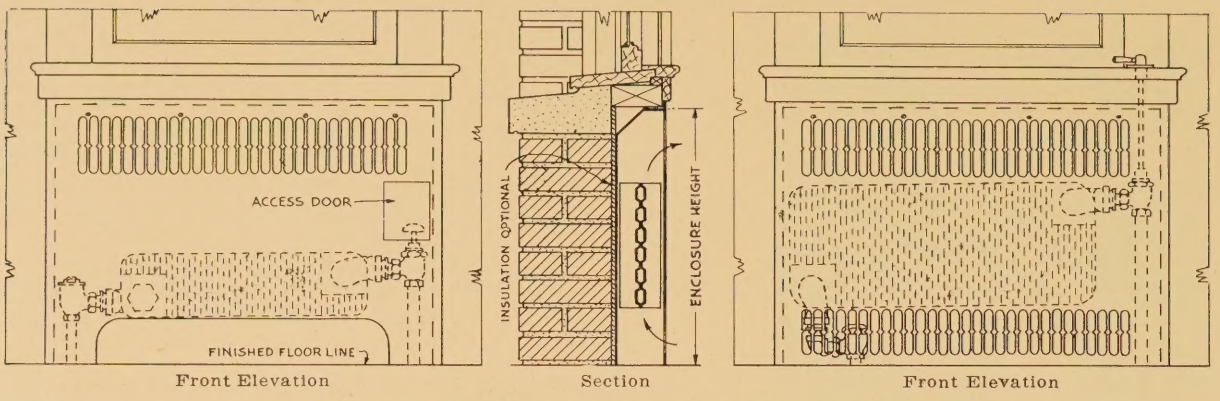
FOR EXAMPLE: 7 No. B-9 B. R. UNITS, TWO PIPE ASSEMBLY, ½" x ½", VAPOR.

The heavy steel cabinets specially designed for these units are open at the bottom and are provided with a grille in the top. No supports are necessary except for one pipe steam installations where a small bracket should be used at the end of the unit opposite the valve. Slots in the ends of the cabinets where connections occur permit easy removal when necessary.

Bathroom Units B-3 and B-5 are tapped ½". Units B-9 to B-20 inclusive are tapped 1¼" and bushed to specified sizes. Dimension "A" includes bushings.

*Units Nos. B-3 and B-5 are furnished with finned tube convectors, while Nos. B-9, B-12, B-16 and B-20 are of the Box Fin type.

ROBRAS INSTALLATION DATA



Front Elevation — Section — Front Elevation

Typical Low Type (L) and High Type (H) Robras Installations

Typical Rocop Installations are shown on page 17

The illustrations above show but two of the many ways in which Robras convectors can be installed. The location of the access door can be varied depending on the location of the valve. The extension stem for the valve need not be carried up to the window stool as shown, if more convenient to operate the valve through an access door. The access door may be placed in the top or bottom grille. In some cases where the valve is located under the convector the valve handle can be set so as to be operated through the air inlet opening in the front of the enclosure. (See illustrations on page 17.)

Insulation for wall recesses is desirable but not absolutely necessary with good building construction. In some cases, however, it may be quite essential.

UNDER THE FLOOR INSTALLATIONS — ROBRAS High or Low Type

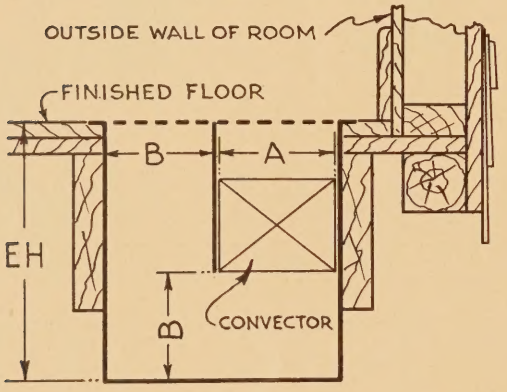


Fig. 1

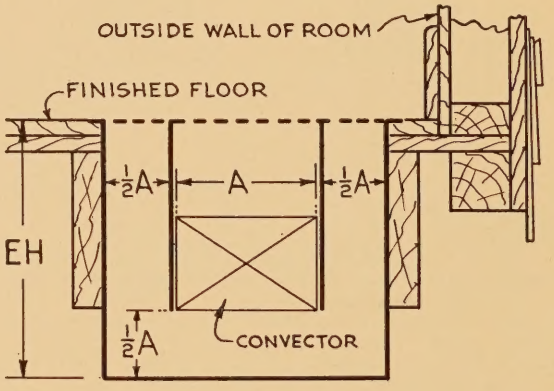


Fig. 2

Fig. 2 is recommended when convectors 9½" and 11½" deep are used

It is often necessary to install convectors under the floor, particularly when the total amount of required radiation cannot be installed in side walls. The light weight and ease of handling Rome Convectors are points worth considering for installations of this kind. Clean out doors should be provided for the bottom and end of housing.

To determine capacities of convectors required when installed as above, add to standard heat loss requirements of the room the per cent shown in the accompanying table corresponding to the depth of convector desired and design of housing. The designation of the proper convector can then be found by reference to Top Outlet Capacity Tables on page 4.

Convector Depth	Per cent to be added to standard heat loss requirements		
	When B=A	When B=¾A	When B=½A
3½ inches	20	30	40
5½ inches	20	30	40
7½ inches	20	30	40
9½ inches	25	35	50
11½ inches	30	40	60

When installation is as in Fig. 2, use first per cent column in table.

PART II — ROCOP CONVECTORS

The ROCOP Convector is a worthy companion for ROBRAS. It was originally developed for a lower priced field where installation conditions that are somewhat standardized exist. It is, however, as flexible and adaptable to special architectural treatment and unusual conditions as ROBRAS is. Quality has not been sacrificed in any way in the design or construction of ROCOP. Although light in weight, strength and ruggedness have been important considerations and the device is capable of withstanding internal pressures far in excess of any reasonable operating requirements. The high pressure test given each convector insures freedom from leaks in operation.

The important features of construction shown in the illustrations below are as follows:

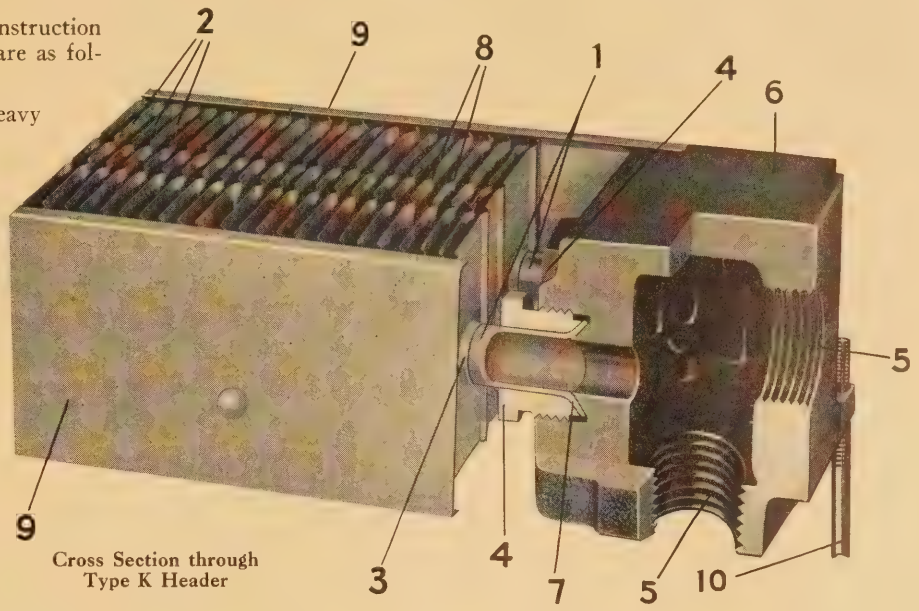
1. Heating fluid contained in heavy seamless copper tubes.

2. Fins made of pure copper, the most efficient conductor of heat of any commercial metal.

3. Fins metallicly bonded to tubes to insure permanent heat transfer from prime to secondary heating surface. No chance for continuous expansion and contraction to loosen this connection with resultant loss in efficiency.

4. Compression screws for joining tubes to headers. Headers removable or invertible if necessary.

5. Connections to headers, except 11½″ depth, may be made in either of two places.



Cross Section through Type K Header

6. Headers constructed of high pressure metal.

7. Standard compression joint-flared portion of copper tubing firmly gripped between header and compression screw seats.

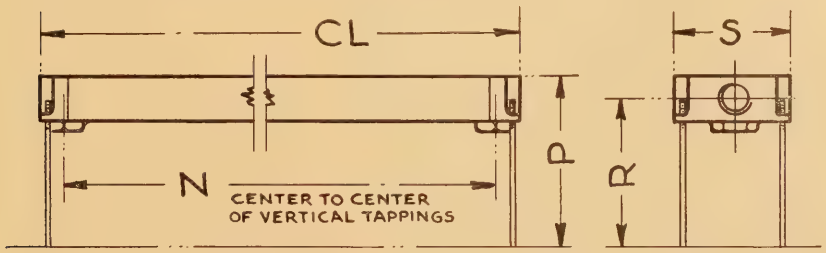
8. Re-inforced fins for strength and additional heating surface.

9. Re-inforced side plates strengthen and prevent sagging.

10. Stud legs for adjusting convector to proper pitch and for inequalities in floor level.

ROCOP Convectors are designated by numbers representing length, type of header, and depth. For example, 26K3 indicates a ROCOP Convector 26″ long with a Type K header 3½″ deep.

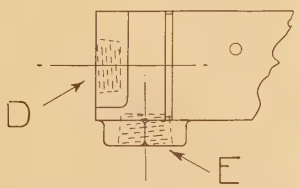
Pages 14 and 15 show Standard ROCOP Units, consisting of convector and enclosure. **Type PA supersedes the former Type J Unit and Type PL supersedes Type K Unit.**



Type K with Adjustable Stud Legs

CL	18	22	26	30	36	42	48	54	60	66	72
N	15¾	19¾	23¾	27¾	33¾	39¾	45¾	51¾	57¾	63¾	69¾
TYPE		K3		K5		K7		K9		K11	
Tappings		¾″		1″		1″		1″		1″	
P		8⅛		8⅛		8⅝		8⅝		9	
R		7 3/16		7 3/16		7 9/16		7 9/16		7 13/16	
S		3½		5½		7½		9½		11½	

ROCOP Convectors have met with wide acceptance where light but sturdy convectors are required. They are primarily for use on two pipe steam systems, but by a special arrangement they may be used for one pipe steam. A choice of two locations for connections to headers permits latitude in the arrangement of piping, which is a valuable feature especially where space conditions are limited.



Note that Type K11 Convectors are tapped at E only, all others at D or E

ROCOP CONVECTOR CAPACITIES with Face Outlets

Heating effect in Equivalent Square Feet (240 B.t.u.). Steam temperature 215°. Entering air temperature 65°.

B.t.u. requirements divided by 240 will equal the corresponding convector capacity in square feet.

Enc'l Ht.	18K3	22K3	26K3	30K3	36K3	42K3	48K3	54K3	60K3	66K3	72K3
	Rocop Convectors 3½ inches deep—Face Outlets										
16	8	10¼	12¼	14½	17¼	20¼	23	26	29	32	35
20	10	12½	15	17¼	21	24¾	28½	32¼	36	39¾	43½
23	11	13¾	16½	19	23¼	27¼	31½	35¾	40	44¼	48½
26	12	15	17¾	20½	25¼	30	34½	39	43½	48	52½
29	12½	16	19	22¼	27	32	37	41¼	46¼	51½	56¼
32	13	16½	19¾	23¼	28½	33½	38½	43¾	48¾	53¾	59
36	14	17½	21	24¾	30	35½	40½	45¾	51½	56¾	62
48	15½	19¼	23¼	27¼	33¼	39	45	50¼	56½	62½	68½
60	16¼	20¼	24¼	28½	34¾	41	47½	53	59¼	65½	72½
	Rocop Convectors 5½ inches deep—Face Outlets										
16	11½	14½	17¾	20	24¾	29½	34	38½	43	47½	52
20	14	17½	21½	26	32	38	44	50	55¾	61½	67½
23	15¼	19½	24	28¾	35¼	42	48½	55	61½	68	74½
26	16½	21¼	26	31	38¼	45¼	52½	59½	66¼	73½	80¾
29	17¼	22½	27¾	33	40	47¾	55¼	63	70¼	77½	85¼
32	18	23½	29	34	41¾	49¾	57¾	65¾	73	81	89
36	19	24¾	30½	35¾	44	52½	60½	69	76¾	84¾	92¾
48	21¼	27½	33½	39	48¼	57½	66	74¾	83¾	93	102
60	22¾	29	35½	41½	51	60¾	69½	78¾	88¼	97½	107
	Rocop Convectors 7½ inches deep—Face Outlets										
16	14¼	18¼	22½	26½	32½	38½	44¾	51¼	57	63¼	69½
20	18¼	23¾	29¼	34¾	43	50¼	59¼	66½	74¾	82½	91¼
23	20½	26	32	38	47	56	65	74	83	91½	100½
26	21¾	28	34½	41	50½	60¼	69½	79½	90	98¼	107¾
29	23	29¾	36½	43	53	63	73	83½	93½	103¾	113½
32	24	31	38	45	55	65½	76	86½	98	108	118
36	25	32¼	39¾	47	57¾	69	79	90½	102½	113	123½
48	27	35	43¾	51¼	63	74¾	86½	98½	111½	123	136
60	28¾	36¾	46¼	54	66½	78½	91½	103¾	117	130	143½
	Rocop Convectors 9½ inches deep—Face Outlets										
20	21¼	27	32¾	38½	46½	55¼	64	71½	80½	88	97½
23	23¾	30	36¼	42½	52¼	61¾	71¼	81	90¼	99½	108¾
26	25¾	32½	39	46	56½	67	77	88	98	108¼	118½
29	27½	34¼	41½	48¾	59½	70½	81¼	92¼	103¼	114	124¾
32	28¾	36	43¾	51	62¼	73¾	85	96½	108	119½	130½
36	30	37¾	45¾	53¾	65¼	77¼	88½	100¾	112½	124½	136
48	32¾	41	50	58½	70½	84	96¾	110	122½	136	149¼
60	34¼	43	52½	61¼	74¼	87¾	102¼	115½	129¾	143½	157½
72	35½	44¼	54½	63¼	77	90½	106	119½	134½	149	163½
84	36¼	45½	55¾	64¾	78¾	92½	108½	122½	138	152½	167½
96	37	46	56½	65¾	80	94¼	110	124½	140	154¾	170
120	38	47½	57½	67¼	81½	96½	111½	126¾	142	156½	172½
	Rocop Convectors 11½ inches deep—Face Outlets										
Enc'l Ht.	18K11	22K11	26K11	30K11	36K11	42K11	48K11	54K11	60K11	66K11	72K11
23	27½	33½	40	47	57	67½	77½	87½	97½	107	117
26	29¾	36½	43½	51	62	73¼	84	95	105½	116	127
29	31½	39	46½	54¼	66¼	78	89½	101½	112½	123¾	135¼
32	33¼	40¾	49¼	57	69½	81½	93¾	106½	118½	130½	141¾
36	34¾	43	51¾	60	72½	85½	98½	111½	124½	137¼	149½
48	37¾	46½	55¾	64¾	78½	93	106¾	120¾	134½	148¾	162½
60	39½	48½	58	67¼	81¾	97	111	125¾	140	154¾	171
72	40½	49½	59½	69	83¾	99¾	114¼	129½	144¼	159	176¾
84	41	50½	60½	70	85½	102	116½	132¼	147¼	162½	180½
96	41½	51	61¼	71	86½	103¾	118	134	149½	164¾	183
120	42	51¾	62½	72½	89	105	121	137	153	169	185

ROCOP CONVECTOR CAPACITIES with Top Outlets

Heating effect in Equivalent Square Feet (240 B.t.u.). Steam temperature 215°. Entering air temperature 65°.

B.t.u. requirements divided by 240 will equal the corresponding convector capacity in square feet.

Enc'l Ht.	Rocop Convectors 3½ inches deep—Top Outlets										
	18K3	22K3	26K3	30K3	36K3	42K3	48K3	54K3	60K3	66K3	72K3
16	10½	13½	16	18¾	22½	26¼	30¼	34	38	42	46
20	11½	14¾	17¾	20¾	24¾	29	33½	37¾	42¼	46½	51
23	12	15½	18¼	21½	26¼	30¾	35¾	40	45	49¼	54¼
26	12¾	16	19	22¼	27½	32¼	37½	42¼	47¼	52	57
29	13	16¾	20	23¼	28¾	33¾	39¼	44	49½	54¼	59½
32	13½	17¼	20¾	24	29¾	35	41	46	51¼	56	61¾
36	14	18	21½	25¼	31	36¾	42½	47¾	53½	58½	64¼
48	15½	19½	23½	27¾	33¾	40¼	46	52	58	64	70¼
60	16¼	20¾	25	29	35¼	42	48	54½	60½	67½	74¼

Enc'l Ht.	Rocop Convectors 5½ inches deep—Top Outlets										
	18K5	22K5	26K5	30K5	36K5	42K5	48K5	54K5	60K5	66K5	72K5
16	16	20½	25	30	36¼	42¾	49½	56	63	69	76
20	17	22	26¾	32	39	46	53½	61	68½	75½	83
23	18	23	28	33¼	40¾	48	56¼	64	72	79½	87½
26	18¾	24	29¼	34¾	42½	50	58½	66½	74¾	82¾	91
29	19¼	24¾	30¼	36	44	52	60½	68¾	77½	85½	94½
32	20	25¾	31¼	37	45¼	53¾	62¼	71	80	88	97
36	20¾	26¾	32¼	38¼	47	56	64¾	73½	82½	91	100¼
48	22¼	29	35	41½	51	60½	70	79½	89	98½	108½
60	23¾	30½	37	43¾	53½	63½	73	83¼	93¼	103½	114

Enc'l Ht.	Rocop Convectors 7½ inches deep—Top Outlets										
	18K7	22K7	26K7	30K7	36K7	42K7	48K7	54K7	60K7	66K7	72K7
16	21½	28	34½	40¼	50	59	68½	78½	87½	97	106½
20	23	29¾	36¾	43	53½	63½	73½	84	94½	104½	114½
23	24	31	38¼	45	56	66	77	87¾	98¾	109	119½
26	24¾	32	39¾	46¾	57¾	68½	79¾	91	102½	113	123¾
29	25½	33¼	41	48¼	59¾	70¾	82¼	93¾	105¾	117	127¾
32	26¼	34	42	49¾	61¼	72½	84½	96¼	108½	120	131
36	27	35¼	43½	51¼	63½	75	87¼	99½	112	124	135½
48	29	38	47	55¼	68¼	80¾	94	107	120¾	133½	147
60	31	40	49	58	71	84½	98½	112¼	126½	140	155½

Enc'l Ht.	Rocop Convectors 9½ inches deep—Top Outlets										
	18K9	22K9	26K9	30K9	36K9	42K9	48K9	54K9	60K9	66K9	72K9
20	26¾	34	42	49½	60½	72	83¼	94½	106	117½	129½
23	28	36	44	52	63¾	75½	87½	98¾	111	123½	136
26	29¼	37½	46	54¼	66½	78½	91	103	115½	128½	141
29	30¼	39	47½	56¼	69	81½	94	106½	119½	133	145½
32	31¼	40¼	49	57¾	71	83¾	96¾	109¾	123	137	150
36	32½	41¾	50¾	59¾	73¼	86¾	100	113½	127	141	154½
48	35	45	54¾	64½	79	94	108	122¾	137½	152½	167
60	36¾	47	57	67½	83	98½	113½	129¾	145	160½	176
72	38	48½	59	69¾	85½	102	117¼	134	150	166	182
84	39	49¾	60¼	71	87½	104	120	137	153½	169¾	186
96	39½	50¼	61	72	88¾	105½	121½	139	156	172	189
120	40	51	62	73	90	106¾	123½	140	158	175	192

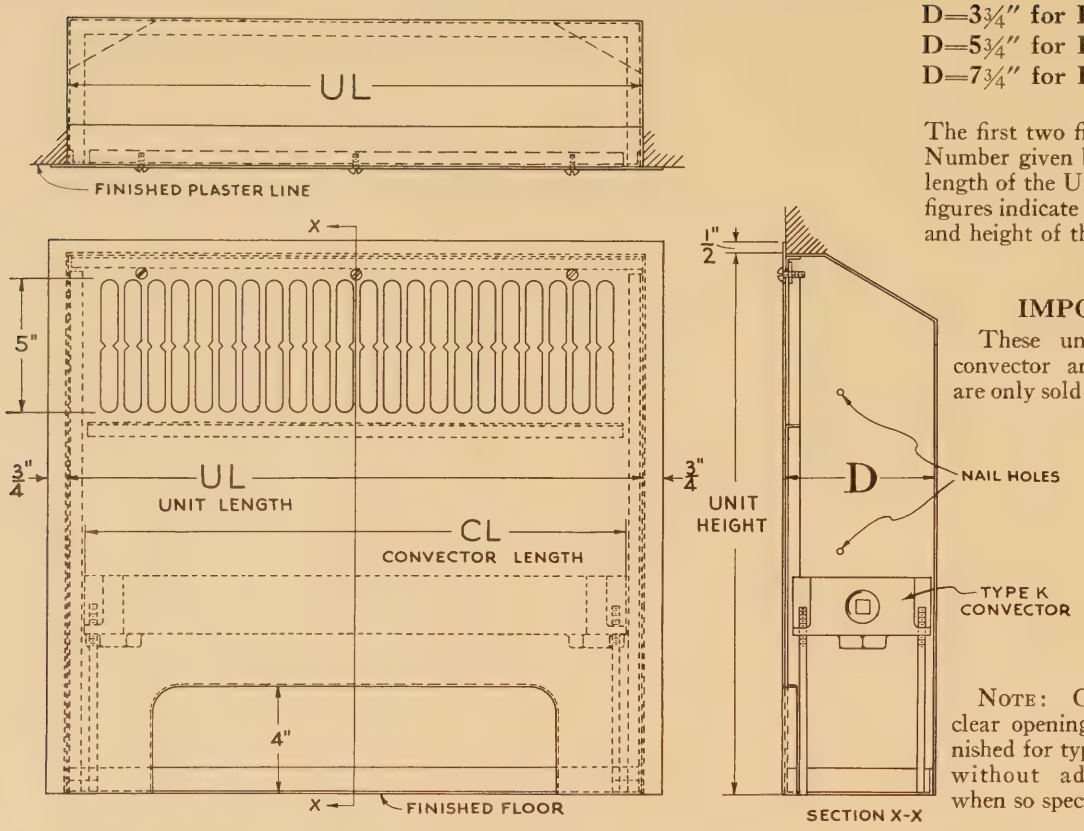
Enc'l Ht.	Rocop Convectors 11½ inches deep—Top Outlets										
	18K11	22K11	26K11	30K11	36K11	42K11	48K11	54K11	60K11	66K11	72K11
23	32½	41¼	50	58¾	71½	85	98½	111	124	137	150½
26	34	43	52¼	61¼	75	89	102½	116	129	142½	157
29	35½	45	54¼	64	77½	92	106	120	133¾	148	162½
32	36¾	47¼	56	66	80	95	109½	123¾	137½	152	167
36	38	48	58	68	83	98	113	128	142½	157¾	173
48	40¾	51¾	62¼	73½	89¾	106	122¾	138½	155	171½	188½
60	42¾	54	65½	77	94¼	111	129¼	146¼	164	181½	199
72	44	55¾	68	79½	97½	114¾	133¾	151¼	170¼	188	206½
84	45	57	69½	81¼	100	117½	136¾	155	174½	192½	211¼
96	46	58	70½	83	101¼	119¼	139	157¼	177	195½	214¼
120	47	59½	72	84½	103	121¾	141	160	179	198	217

ROCOP TYPE PA UNITS

(Formerly Type J Units)

PANEL FRONT

Complete with Convector and Enclosure



Height of top grille is 6" for PA Units—7¾" Deep

D=3¾" for K3 Convectors
D=5¾" for K5 Convectors
D=7¾" for K7 Convectors

The first two figures of the Unit Number given below indicate the length of the Unit. The last two figures indicate the nominal depth and height of the Unit.

IMPORTANT

These units include both convector and enclosure and are only sold ***in combination.***

NOTE: Grille in place of clear opening at bottom; furnished for type PA Units only, without additional charge when so specified on order.

CAPACITIES AND WEIGHTS

LENGTHS		20" HEIGHT			23" HEIGHT			26" HEIGHT		
UL	CL	Unit Number	Sq. Ft.	Approx. Wt.	Unit Number	Sq. Ft.	Approx. Wt.	Unit Number	Sq. Ft.	Approx. Wt.
19	18	19PA30	10¼	34	19PA33	11	37½	19PA36	12	41½
		19PA50	14	40½	19PA53	15¼	44	19PA56	16¾	47½
		19PA70	18¼	51	19PA73	20¼	51	19PA76	21¾	55
23	22	23PA30	12¾	38½	23PA33	13¾	42	23PA36	15	46
		23PA50	18	46	23PA53	19¾	49½	23PA56	21½	53
		23PA70	23¾	53	23PA73	26	57	23PA76	28	61½
27	26	27PA30	15	43	27PA33	16½	46½	27PA36	17¾	51½
		27PA50	22	51	27PA53	24½	55	27PA56	26¼	59
		27PA70	29¼	59	27PA73	32	63	27PA76	34½	68½
31	30	31PA30	17¼	47½	31PA33	19	52	31PA36	20½	56½
		31PA50	26	56	31PA53	28¾	61	31PA56	31	65
		31PA70	34¾	65	31PA73	38	70	31PA76	41	75
37	36	37PA30	21	54½	37PA33	23¼	59½	37PA36	25¼	64½
		37PA50	32	63½	37PA53	35¼	69	37PA56	38¼	74½
		37PA70	43	73½	37PA73	47	80	37PA76	51	85½
43	42	43PA30	24¾	60½	43PA33	27¼	66½	43PA36	30	72½
		43PA50	38	71	43PA53	42	77	43PA56	45½	83
		43PA70	51¼	82½	43PA73	56	89	43PA76	61	95
49	48	49PA30	28½	67½	49PA33	31½	74	49PA36	34½	81
		49PA50	44	78	49PA53	48½	85	49PA56	52½	91½
		49PA70	59¼	90	49PA73	65	98½	49PA76	70½	106
55	54	55PA30	32¼	75	55PA33	35¾	82	55PA36	39	89
		55PA50	50	86	55PA53	55	94	55PA56	59½	100½
		55PA70	67¼	99	55PA73	74	109	55PA76	80½	119

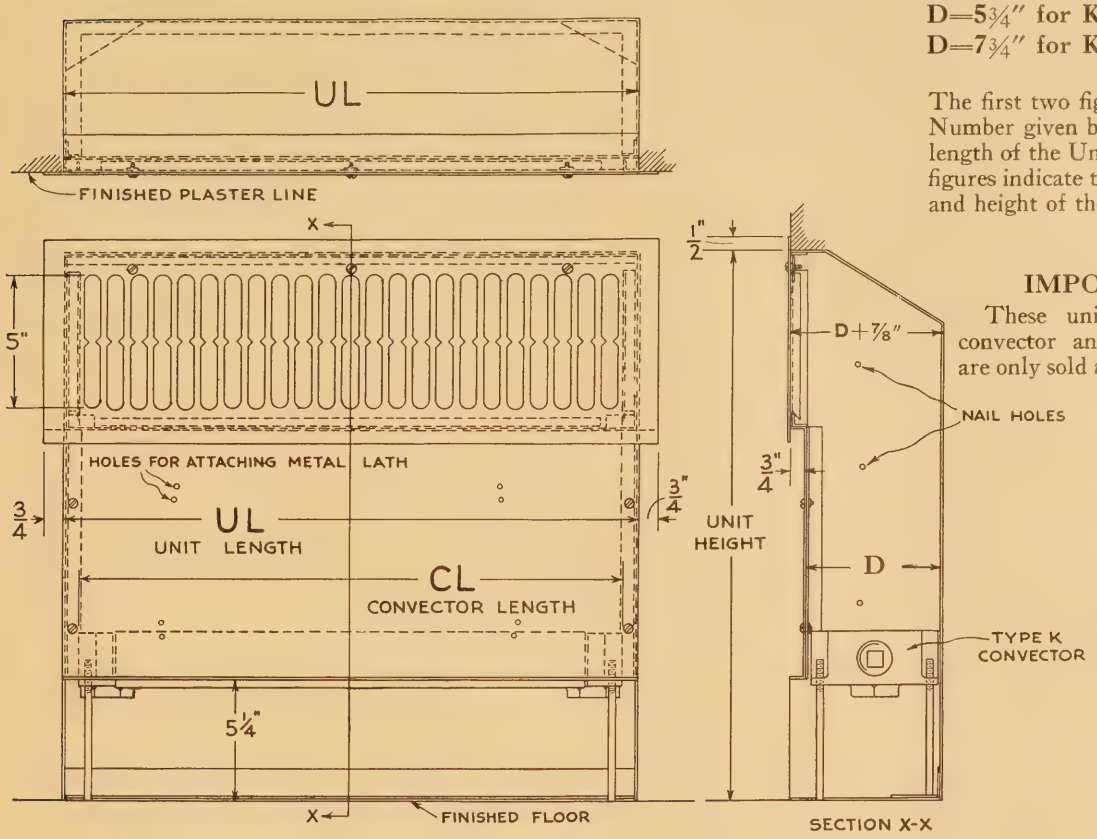
ROCOP TYPE PL UNITS
(Formerly Type K Units)

PLASTER FRONT

Complete with Convector and Enclosure

D=3¾″ for K3 Convectors
D=5¾″ for K5 Convectors
D=7¾″ for K7 Convectors

The first two figures of the Unit Number given below indicate the length of the Unit. The last two figures indicate the nominal depth and height of the Unit.



IMPORTANT

These units include both convector and enclosure and are only sold *in combination.*

CAPACITIES AND WEIGHTS

LENGTHS		20″ HEIGHT			23″ HEIGHT			26″ HEIGHT		
UL	CL	Unit Number	Sq. Ft.	Approx. Wt.	Unit Number	Sq. Ft.	Approx. Wt.	Unit Number	Sq. Ft.	Approx. Wt.
19	18	19PL30	10¼	24½	19PL33	11	28	19PL36	12	31
		19PL50	14	31	19PL53	15¼	34	19PL56	16¾	36½
		19PL70	18¼	36	19PL73	20¼	39	19PL76	21¾	42
23	22	23PL30	12¾	28½	23PL33	13¾	31½	23PL36	15	35
		23PL50	18	35	23PL53	19¾	38	23PL56	21½	41
		23PL70	23¾	41	23PL73	26	44	23PL76	28	48
27	26	27PL30	15	32½	27PL33	16½	35½	27PL36	17¾	39
		27PL50	22	39	27PL53	24¼	42	27PL56	26¼	46
		27PL70	29¼	45½	27PL73	32	49½	27PL76	34½	53
31	30	31PL30	17¼	36½	31PL33	19	40	31PL36	20½	43½
		31PL50	26	43	31PL53	28¾	47	31PL56	31	51
		31PL70	34¾	50	31PL73	38	54½	31PL76	41	59
37	36	37PL30	21	41½	37PL33	23¼	45½	37PL36	25¼	50
		37PL50	32	49	37PL53	35¼	53½	37PL56	38¼	58
		37PL70	43	57	37PL73	47	62	37PL76	51	67
43	42	43PL30	24¾	46½	43PL33	27¼	51	43PL36	30	56
		43PL50	38	56	43PL53	42	60½	43PL56	45½	65½
		43PL70	51¼	64½	43PL73	56	70	43PL76	61	75
49	48	48PL30	28½	52	49PL33	31½	57	49PL36	34½	63
		48PL50	44	62	49PL53	48½	67	49PL56	52½	72½
		48PL70	59¼	71	49PL73	65	78	49PL76	70½	86
55	54	55PL30	32¼	58	55PL33	35¾	63½	55PL36	39	69½
		55PL50	50	68	55PL53	55	73	55PL56	59½	79½
		55PL70	67¼	78½	55PL73	74	87	55PL76	80½	96

ROCOP CONVECTORS for One Pipe Steam Systems

Where Rocop Convectors are to be installed on one pipe steam systems it is necessary for them to be equipped at the factory with a special condensate return line as shown in the accompanying illustration. It consists of a horizontal copper tube and check valve connecting special headers. The Convector should be installed as nearly level as possible, no pitching being required.

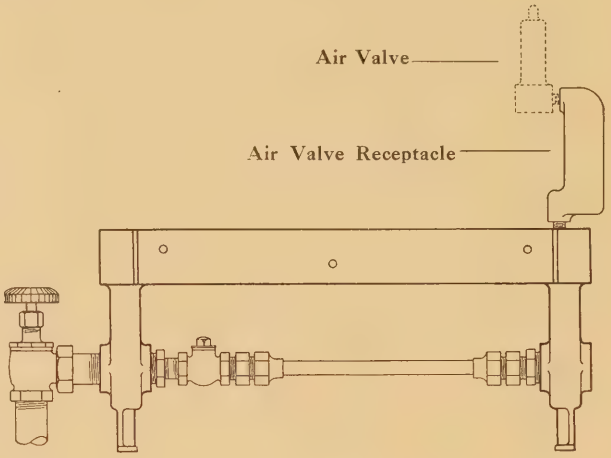
By the use of the check valve the incoming steam must pass only through the core of the convector. Thus a positive and uninterrupted return of the condensate to the supply line and a steady one-way circulation of both steam and condensate are insured.

This check valve connection is essential to the satisfactory functioning of any convector of this general type on one pipe steam systems and ***we do not guarantee*** the performance of Rocop convectors on such systems without this indispensable accessory which is an exclusive Rocop feature.

Rocop ***Convectors over 54″ long and 7½″ deep are not furnished for one pipe steam systems.***

The air valve receptable shown in the illustration is furnished with each one pipe steam convector. This makes possible the use of a syphon type air valve without its projecting beyond the end of the convector. These convectors may thus be installed in close fitting enclosures.

An additional charge will be made for all Rocop one pipe steam assemblies.



PART III — ENCLOSURES

FOR ROBRAS OR ROCOP CONVECTORS

The information given below ***does not apply*** to enclosures furnished with Rocop Units which are made only in the standard sizes shown on pages 11 and 12.

The illustrations on the two following pages show the various types of enclosures that can be furnished for Rome Convectors, either Robras or Rocop. These are of four general kinds; namely, removable panel front, plaster front, wall hung and free standing cabinet. Separate fronts similar to the designs shown on page 17 are also available without the recess linings.

The Standard Enclosures shown on page 17 have a few features of refinement over the Universal Enclosures shown on page 18. They are strongly constructed of heavy gauge steel and are properly re-inforced to prevent damage that might often occur in a new building before the installation is entirely completed. The panel fronts of the Standard Enclosures overlap and conceal the joint between the finished plaster and the recess linings. For that reason they cannot be partially recessed as in the case of Universal Enclosures. Wall hung enclosures of the standard type are made without backs and are supported through keyhole slots in heavy vertical flanges at ends.

The Universal Enclosures may be installed entirely or partially recessed, or as free standing cabinets. While heavy and substantial, their construction differs slightly from the Standard Type. By a slight change in the removable front they can be either plastered in or wall hung. The ends of the enclosures act as grounds to which the plaster can be finished. Universal Type Enclosures can be furnished with top outlet grilles if so ordered.

Small doors for access to valves can be furnished for either Standard or Universal type enclosures. Their location will naturally depend on the position of the valve handle. The standard size is 4″ x 5″. Accurate dimensions for location of access doors must be given when ordering enclosures.

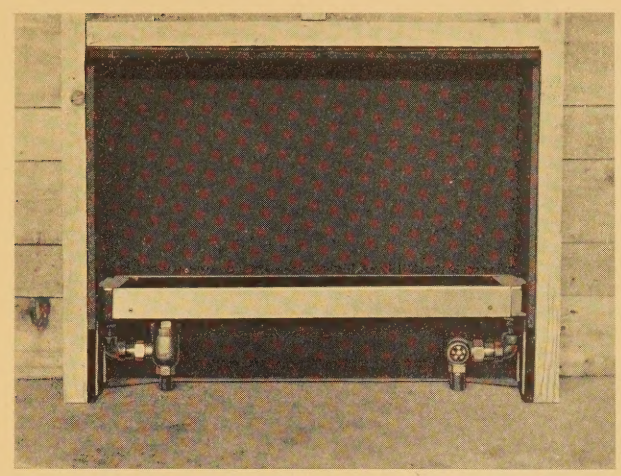
Dampers in convector enclosures are not a positive means of controlling the heat output and are not generally recommended. They can be furnished, however, at additional cost if so specified on order. Only a neat operating knob projects through the front of the enclosure.

Enclosures can be furnished with approved insulation securely applied to ends and back of enclosure lining at slight additional cost when specified on order.

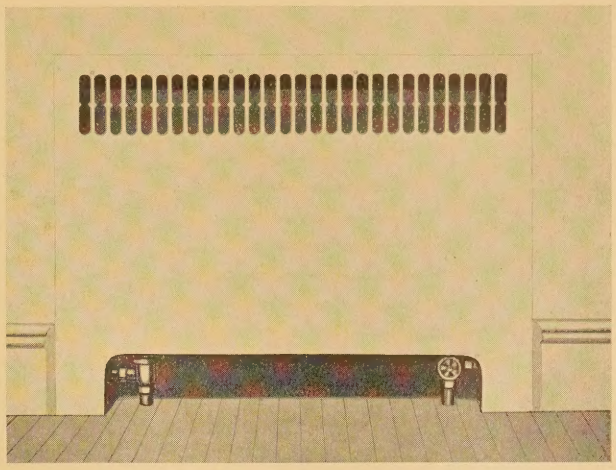
All enclosures are furnished in prime coat finish unless otherwise specified; the fronts and entire free standing enclosures in light grey and the recessed linings in black.

Our representatives will gladly cooperate in working out designs for proper enclosures to meet special conditions. By taking advantage of this service a saving in the cost of special enclosures can often be effected.

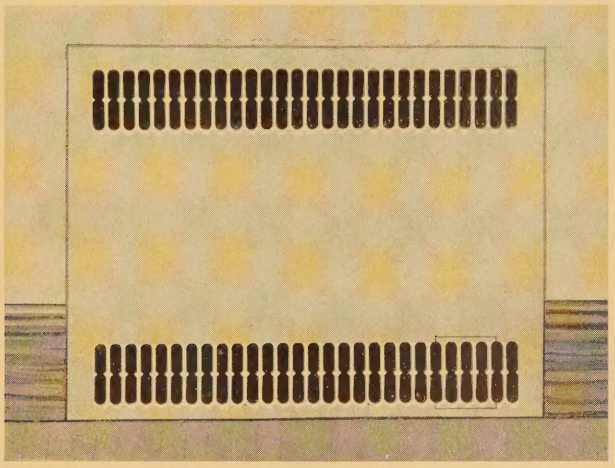
STANDARD ENCLOSURES for ROBRAS or ROCOP



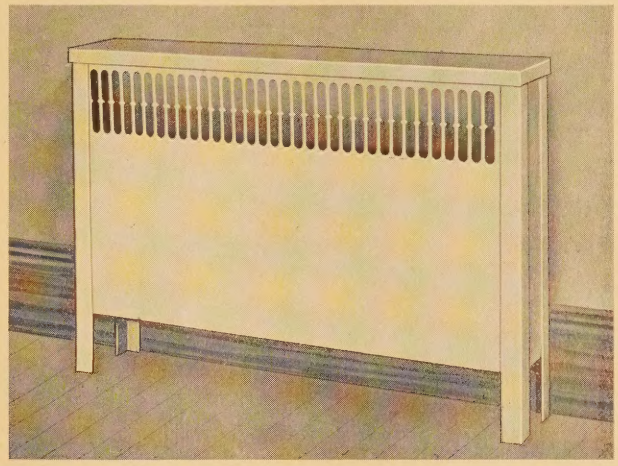
Type No. S1 with Removable Panel Front Off
Suitable framing shown with recess lining and convector in place



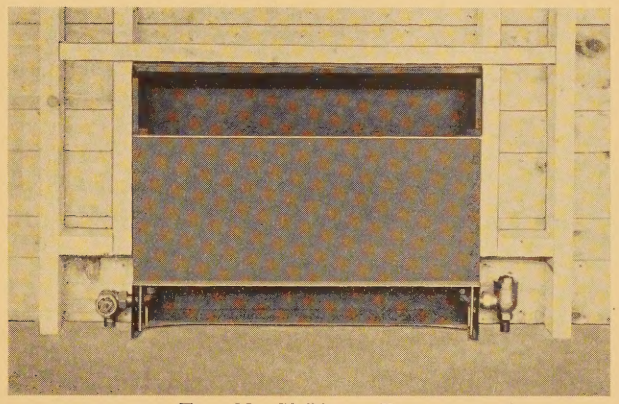
Type No. S1 Complete
Panel Front attached after plastering is finished



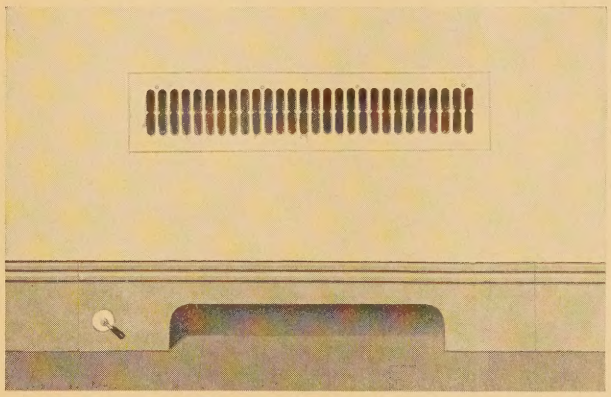
Type No. S2 Removable Panel Front
Same as Type No. 1 except for bottom grille



Type No. SF Free Standing Enclosure
Type SF DeLuxe has decorative panel molding



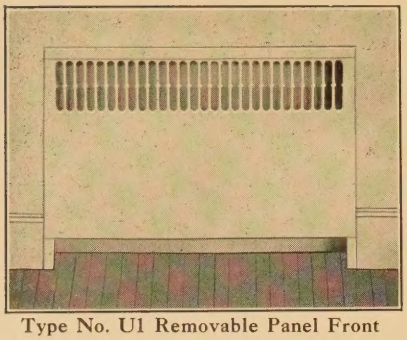
Type No. S3 Plaster Front
Convector and recess lining in place ready for metal lath



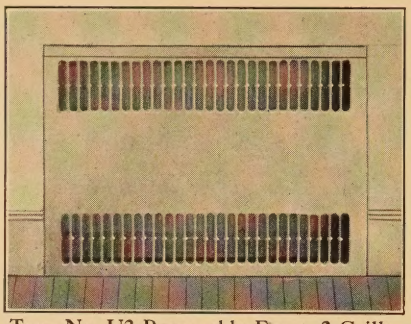
Type No. S3 Complete

The illustrations above show typical Standard Enclosures with suggestions as to framing and pipe connections. The Free Standing Enclosures, Type No. SF, as well as Types S1 and S2, can be furnished with a small decorative molding applied to the front to form a panel, at a slight additional cost. ¾″ square lattice grilles are optional in place of the bar type shown. Metalace grilles can be furnished at an additional cost. Although not shown above, the recommended location of enclosures is under windows. Baseboard may extend across front of Type S1 if desired.

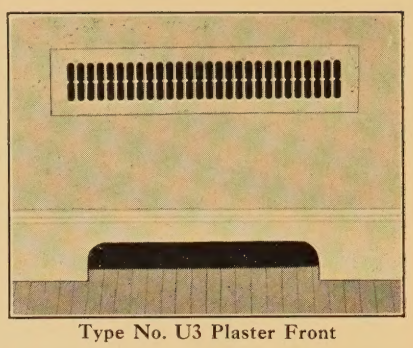
UNIVERSAL ENCLOSURES for ROBRAS or ROCOP



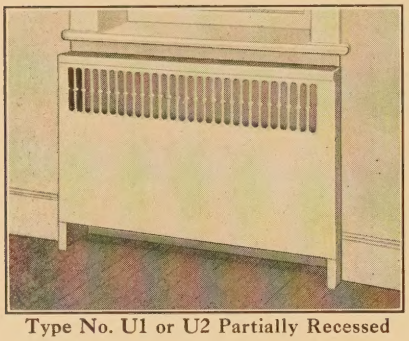
Type No. U1 Removable Panel Front



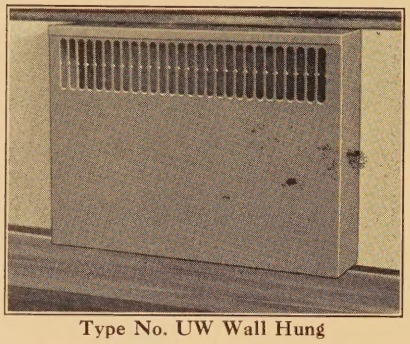
Type No. U2 Removable Front, 2 Grilles



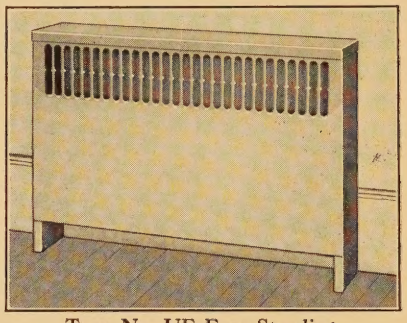
Type No. U3 Plaster Front



Type No. U1 or U2 Partially Recessed



Type No. UW Wall Hung

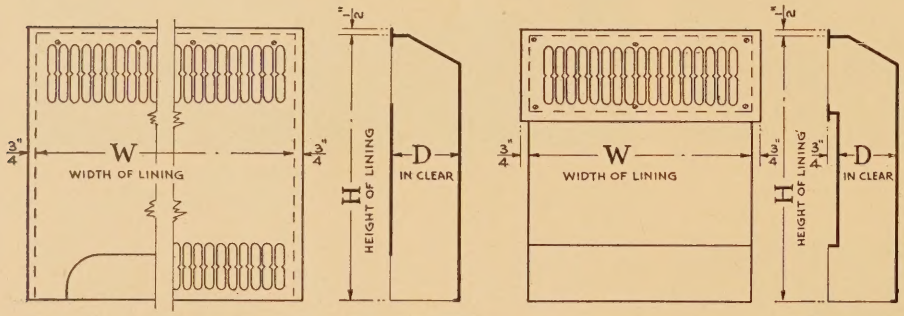


Type No. UF Free Standing

DIMENSIONS REQUIRED *for* ORDERING ALL ENCLOSURES

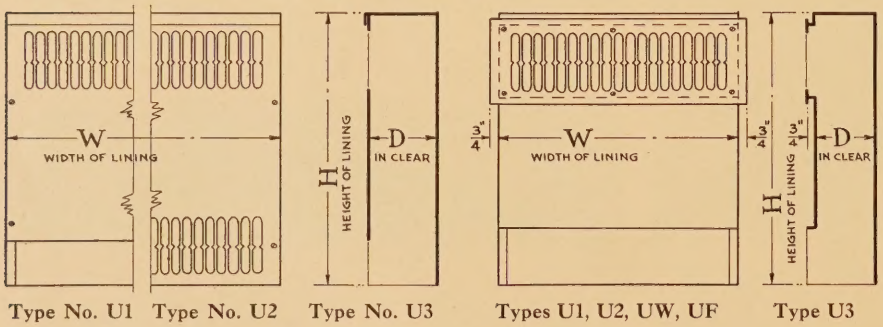
Except Those Furnished With Rocop Units

Standard Type



Type No. S1 Type No. S2 Type No. S3 Type S1 or S2 Type S3

Universal Type



Type No. U1 Type No. U2 Type No. U3 Types U1, U2, UW, UF Type U3

Typical Universal Enclosures are shown above. ¾″ square lattice grilles are optional in place of the bar type grille shown. These enclosures are suitable for a variety of space conditions, particularly as to depth of recesses, as they can be wholly or partially recessed without any change in construction. All fronts are removable, except on the U3 type, after the installation is complete, thus providing easy access to the Convector. As in the case of Standard Enclosures a decorative molding can be furnished for fronts for all except Type U3 at a slight additional cost.

At an additional charge an arched air inlet opening can be furnished on the bottom of the removable panel front on Type U 1 instead of the rectangular opening shown. If desired, the baseboard, cut out as shown for Type U 3 above, may be carried across the front of Type U 1 enclosures.

For detailed dimensions of all enclosures see separate folder that will be sent on request.

When ordering any enclosures accurate dimensions for W, H and D shown above must be given. Dimension D is the depth of the enclosure in the clear and should be equal to the nominal depth of the convector plus ¼″. Wall recess sizes should equal W plus ½″, H plus ¼″ and D plus ⅛″. Unless otherwise specified, bar type grilles will be furnished.

PART IV — GENERAL INFORMATION

Ratings

The Capacity Tables given herewith are based on careful and exhaustive tests conducted in the laboratories of ROME RADIATION COMPANY. These tests are made in accordance with highly approved methods similar to those employed in leading universities and laboratories and agree very closely with the Code for Testing and Rating Concealed Gravity Type Radiation of the American Society of Heating and Ventilating Engineers. The ratings are conservative and dependable.

Steam ratings are based on condensate tests using dry steam at 215° F. (one lb. per square inch pressure) and air at a temperature of 65° F. entering the bottom opening of the convector enclosure. The ratings used in the accompanying Capacity Tables, however, represent the *heating effect* of ROME Convectors and *not* the actual condensate test results. They indicate the *effective heat output* of these convectors in terms of an equivalent amount of exposed radiation. Most heating authorities agree that this type of extended surface heating device produces an increased heating effect over direct exposed radiation. This effect is conservatively held to be at least 10% in excess of test ratings obtained from this type of radiation by the condensate method. The foregoing Capacity Tables have accordingly been increased by this amount.

The selection of a ROME Convector of proper capacity for any particular requirement is arrived at in precisely the same way as in the case of direct exposed radiation. This is done by allowing one sq. ft. of radiation as indicated in the Capacity Tables for each 240 B.t.u. of heat loss in the room.

One-Pipe Steam

ROME Convectors operate successfully on one-pipe steam systems. ROCOP Convectors, however, require a special arrangement for the return of the condensate when used on one-pipe systems. This is described on page 16.

Hot Water

ROBRAS Convectors operate successfully on hot water systems under ordinary conditions. They are not guaranteed for operating pressures in excess of 15 pounds per square inch. Best results are obtained when the greater portion of an installation is ROBRAS.

The following table shows the heat output in B.t.u. per square foot for average water temperature in the convector. Divide the total estimated heat loss from the room in B.t.u. by the proper heat output figure for the corresponding water temperature which is to be maintained in the convector. The result is the capacity in square feet of the convector required. The convector may then be selected directly from the preceding Capacity Tables.

Average water temperature, deg. F.	Heat output of convector in B.t.u. per square ft.
200	195
190	177
180	160
170	143
160	125
150	108
140	91
130	73
120	56

As ROCOP Convectors have been designed especially to meet the requirements of steam and vapor systems they are not generally recommended for use on hot water systems.

Guarantee

The workmanship and material of ROME Convectors is guaranteed and all material found to be defective in manufacture will be replaced by us f.o.b. Rome, N. Y. ROBRAS Convectors are designed to operate on heating systems carrying not over 15 lb. operating pressure and are so guaranteed.

ROCOP Convectors are guaranteed for use on steam systems carrying an operating pressure of not over 50 lbs. per sq. in.

Pressure Tests

ROBRAS Convectors are subjected to a hydrostatic test of 35 lbs. per sq. in. before assembling and a subsequent internal pressure test of 50 lb. of air under water.

ROCOP Convectors are subjected to a searching internal pressure test of 125 lb. of air under water, which insures freedom from leaks under operating conditions.

Inspection

Careful and rigid inspection of all finished convectors is made at our plant prior to shipment.

Suggested Specifications for Robras and Rocop

Furnish and install where shown on plans and called for in the specifications, ROBRAS Convectors manufactured by ROME RADIATION COMPANY, Division of Revere Copper and Brass Incorporated.

All convectors shall be shipped with connection fittings set at the plant in positions to properly meet the available wall (or floor) recesses.

All convectors shall be installed in a horizontal position with fins vertical and pitched in accordance with manufacturer's standards. They may be set on ROBRAS adjustable supports or on standards made of ⅜-in. iron nipples with floor flanges at either end.

Furnish and install where shown on plans and called for in the specifications ROCOP Convectors (or standard ROCOP Units complete with enclosures) manufactured by ROME RADIATION COMPANY, Division of Revere Copper and Brass Incorporated. Headers shall be tapped for supply and return connections in locations best suited to meet available space conditions.

Where commercial enclosures are not furnished all recesses for convectors shall be lined with 26-gauge sheet metal backed with approved insulation. These recesses shall be provided with fronts having face openings above and below the convectors as shown on details. (Note that data as to proper grille sizes or free areas may be obtained from ROME RADIATION COMPANY upon request.)

Furnish and install ROBRAS Bath Room Units where indicated, each being complete with white lacquered metal cabinets 8 in. high. They may be supported by the pipe connections. (Note that for one-pipe steam systems one small angle iron bracket will be required for each unit.)

Service

Representatives of this company will gladly give assistance in laying out ROME Convectors or installing them. Engineering data relating to ROME Convectors in addition to that given in this catalog will be furnished on request.

Organization

ROME RADIATION COMPANY, Division of Revere Copper and Brass Incorporated, was a pioneer in the development of non-ferrous convectors. Our branch offices and representatives are located in principal cities throughout the country and it is our desire to give the best service possible in connection with our products.

DATA ON ENCLOSURES AND GRILLES

The table below is intended for use when designing or specifying enclosures other than the standard types. The heights shown are all MINIMUM and should not be reduced. They apply to FACE OUTLET enclosures only.

Inlet Opening		Outlet Grille	Type Convector	Nominal Length of Convector and Corresponding Minimum Enclosure Height in inches										
Grille No	Grille			18″	22″	26″	32″	38″	44″	50″	60″	70″	Rocop All Lengths	
3″	3½″	4″	L3	14¼	14¼	14½	14½	14½	14¾	14¾	15	15	K3	14
3½″	4″	5″	L5	15¾	15¾	16	16	16	16¼	16¼	16½	16½	K5	15½
4″	5″	6″	L7	17¾	17¾	18	18	18	18¼	18¼	18½	18½	K7	17½
5″	6″	7″	L9	19¾	19¾	20	20	20	20¼	20¼	20½	20½	K9	19½
6″	7″	8″	L11	21¾	21¾	22	22	22	22¼	22¼	22½	22½	K11	21½
3″	3½″	4″	H3	19½	19½	19¾	19¾	19¾	20	20	20¼	20¼		
3½″	4″	5″	H5	21	21	21¼	21¼	21¼	21½	21½	21¾	21¾		
4″	5″	6″	H7	23	23	23¼	23¼	23¼	23½	23½	23¾	23¾		
5″	6″	7″	H9	25	25	25¼	25¼	25¼	25½	25½	25¾	25¾		
6″	7″	8″	H11	27	27	27¼	27¼	27¼	27½	27½	27¾	27¾		

Free Areas and Grille Sizes

The table at the right shows free area data relating to grille patterns most commonly used with enclosures for Rome Convectors. The per cent free area of any grille is the proportion of the total area of the perforations to that area which is bounded by their outermost edges. This latter area is commonly called the "daylight opening." The length of the daylight opening must be at least equal to the nominal length of the convector.

When ordering separate grilles, overall dimensions should be specified. Borders are generally 1½″ wide but may vary slightly, depending on how perforations work out. Grille borders at top and bottom can be held to an exact dimension if Bar Type grilles are specified.

If screw holes are required, they should be specified as plain or countersunk.

Per Cent Free Area for Standard Grille Patterns

Type of Grille	Per cent Free Area
Metalace No. 10	40*
½″ Square Lattice, ¼″ Bar	47*
Metalace No. 41	54*
½″ Square Lattice, 3/16″ Bar	55*
¾″ Square Lattice, ¼″ Bar	59
Metalace No. 50	59
Metalace No. 12	61
Fish Scale	63
¾″ Square Lattice, 3/16″ Bar	66
1″ Square Lattice, ¼″ Bar	67
Standard Rocop Bar Type	71
1″ Square Lattice, 3/16″ Bar	74
Average Bar Type with narrow spindles and wide perforations	Approx. 80

*Not generally recommended.

The information given in this catalog supersedes all previous data relating to Rome Convectors

Rome Radiation Company

Division of Revere Copper and Brass Incorporated

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Agents located in principal cities

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